The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

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MR. JAMES H. CROFTS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER,
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.
ESTABLISHED 1842.

BUSINESS transacted in all descriptions of MINING Stocks and Shares (British and Foreign), Consols, Banks, Bonds (Foreign and Colonial), Railways, Miscellaneous, Insurance, Assurance, Telegraph, Shipping, Canal, Gas, Water, and Dock Shares.

BUSINESS negociated in Stocks and Shares not having a general market value.

BUSINESS in COLLIERY and IRON Shares, and in the principal WAGON and MANUFACTURING COMPANIES of the NORTH of ENGLAND and SCOTLAND.

Mr. J. H. CROFTS, having now established CORRESPONDING AGENCIES in all the CHIEF TOWNS of the United Kingdom, is prepared to deal in the various LOCAL Stocks and Shares at close market prices.

ACCOUNTS OPENED FOR THE FORTNIGHTLY SETTLEMENT.
A Daily Price List, issued at 5 P.M., giving latest Quotations up to close of Market, and every Friday a general List containing closing prices of the week.
MINES INSPECTED.
BANKERS: CITY BANK, LONDON; SOUTH CORNWALL BANK, ST. AUSTELL.

SPECIAL DEALINGS in the following, or part:—

Bettws-y-Coed.	50 Javali, 8s.	10 Roman Grav., £6¾.
Chapel House, £3.	20 Leadhills, £2¾.	40 Rookhope, 11s.
Chontales, 11s.	50 Llanrwst.	10 Richmond, £9¾.
Colorado, £2¾.	25 Morfa Du, 14s.	250 Talybont (offer wtd.)
D'Eresby Consols.	25 Pant-y-Mwyn.	9 Thorp's Gawber Col.,
East Van, £2¾.	50 Penstruthal, 4s. 3d.	offer wanted.
Flagstaff, 11s.	25 Pestarena, 4s. 9d.	25 Van Consols, 10s.
Hultafall, £3¾.	50 Parys Moun., 5s. 3d.	

SHARES SOLD FOR FORWARD DELIVERY (ONE, TWO, OR THREE MONTHS) ON DEPOSIT OF TWENTY PER CENT.

FOREIGN BONDS.—SPECIAL BUSINESS. Fortnightly Accounts opened on receipt of the usual cover.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

RAILWAYS—HOME AND FOREIGN.—SPECIAL BUSINESS. Fortnightly Accounts opened on receipt of the usual cover.
JAMES H CROFTS, 1, FINCH LANE, LONDON.

MISCELLANEOUS AND TRAMWAY SHARES.—SPECIAL BUSINESS in—

MISCELLNAEOUS.	Royal Aquar. (Westm.)	Globe Telegraph.
Alhambra Palace.	ditto Preference.	North Metropolitan
Brighton Aquarium.	Lawes Chemical.	Tramways.

BUSINESS TRANSACTED in all MISCELLANEOUS SHARES (of whatever description) having LONDON or COUNTRY MARKET VALUES.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.
Bankers: City Bank, London; South Cornwall Bank, St. Austell.
ESTABLISHED 1842.

MR. W. H. BUMPUS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER,
44, THREADNEEDLE STREET, LONDON, E.C.
ESTABLISHED 1867.

BUSINESS transacted in STOCK EXCHANGE SECURITIES and MISCELLANEOUS SHARES of every description.
RAILWAYS, BANKS, FOREIGN and COLONIAL BONDS, TRAMWAYS, TELEGRAPHS, and all the LEADING INVESTMENTS,
Accounts opened for the Fortnightly Settlement.
A Stock and Share List free on application.

BUMPUS has SPECIAL BUSINESS in the undermentioned:—

Canada, 6s. 3d.	10 East Van, £2 13s. 9d.	50 Port Phillip, 10s. 6d.
Aberduanant, 5s.	25 Frontino, £2 8s. 9d.	100 Penstruthal, 4s. 6d.
Aberllyn.	50 Flagstaff, 9s. 6d.	25 Pant-y-Mwyn.
Bodsgeye Creek, 14s.	10 Great Laxey, £15¾.	50 Pandora, 10s. 6d.
Bedouin Tent, £3¾.	60 Glenroy, 10s. 6d.	60 Parys Mount., 5s. 3d.
Bodidris.	15 Gorsedd & Mer., £4½	18 Richmond, £10½.
Chontales, 12s. 6d.	40 Hultafall.	75 Rookhope.
Colorado, £2½.	50 Javali, 8s. 6d.	20 Roman Grav., £6¾.
Clar Creek, 4s. 3d.	30 Kapanga, 22s.	15 So. Frances, £4¾.
Don Consols, 28s 6d	25 Leadhills, £2½.	10 So. Condurrow.
Don Pedro, 9s. 6d.	50 Last Chance, 16s. 3d.	20 Tankerville, £4.
Eberhardt, £4.	20 Llanrwst, 31s. 6d.	5 Van, £16¼.
Exchequer, 6s. 9d.	40 Marke Valley, 14s.	40 W. Pateley Bridge.
Flagstaff Caradon, 6s. 6d.	20 New Quebrada, 33s 6d	8 W. Chiverton, £3¾.
(£1 all paid).		

SPECIAL BUSINESS, at close prices, in the SHARES of all the principal HOME and FOREIGN MINES.

WILLIAM HENRY BUMPUS, SWORN BROKER.
Offices: 44, Threadneedle Street, London, E.C.
Bankers—The NATIONAL PROVINCIAL BANK OF ENGLAND, E.C.

BOTT AND CO.,
STOCK AND SHARE DEALERS,
UNION COURT, OLD BROAD STREET, E.C.

WILLIAM B. COBB, STOCK AND SHARE DEALER,
63, CORNHILL, LONDON, E.C.
Bankers: The Alliance Bank (Limited).

WILLIAM GABBOTT, STOCK AND SHARE DEALER,
8, DRAPER'S GARDENS, LONDON, E.C.

SPECIAL BUSINESS in the following:—

Alpha, 6s. 3d.	20 Frontino, £2 8s.	10 Plumas, £2¾.
Bedouin, 12s.	10 Isabella.	50 Port Phillip, 10s. 6d.
Bodello, £2 7s.	70 Javali, 8s.	100 Pestarena, 4s. 9d.
Caradon, 9s. 9d.	50 Kapanga, 22s.	15 Richmond, £10½.
Eberhardt, £3 18s.	35 Last Chance, 16s.	60 Rossa Grande, 2s.
Exchequer.	100 London Company (off. wanted).	25 Sierra Buttes, £1½.
Flagstaff, 9s.		10 Uni. Mexican, £3 18 6

Bankers: The National Provincial Bank of England.

GEORGE BUDGE, STOCK AND SHARE DEALER
GRACECHURCH STREET, LONDON, E.C. (Established 28 years)
BUSINESS TRANSACTED FREE OF ANY CHARGE FOR COMMISSION.
Notice to Investors and Speculators.
GEORGE has SPECIAL DEALINGS in—

Alpha Consol.	25 Eberhardt, £3 14s. 9d.	15 Minera, £8.
Bedouin, £11.	100 Exchequer, 6s.	50 North Hendre.
Bodello.	90 East Chiverton.	25 Pennant.
Bodidris, 18s.	60 Frontino.	100 Parys Mountain, 5s 3d
Caradon, £3¾.	50 Gawton.	100 Pestarena, 4s. 6d.
Chontales, £3¾.	175 Gold Run, 5s. 6d.	50 Penhalls, 15s.
Colorado, £2¾.	25 Grogwinion, £3.	75 Port Phillip, 10s. 9d.
Don, 9¾.	35 Hultafall, £3.	25 Red Rock, £2¾.
Don Pedro House, £3¾.	30 Hornachos, £12¾.	25 Roman Gravels.
Eberhardt.	100 Credit A.	200 Rossa Grande, 2s.
East Van, 20s.	20 General Credit and Discount, £5¾.	50 Pant-y-Mwyn.
Exchequer, £30.	20 National Dis., £9¾.	25 St. Harmon.
Flagstaff, 12s. 6d.	50 I.X.L., 3s. 9d.	20 South Frances, £4¾.
Frontino, 10s. 6d.	50 Llanrwst.	120 Tyn-y-Fron.
Gawton Vert and Tiverton.	65 Ladywell Pref., 11s. 9	20 West Chiverton.
Gladstone Brewery.	2 Lisburne.	50 Wheal Uny, 6s. 6d.
Gwinear Shire.	30 Monydd Gorddu.	30 W. Wye Valley, £2¾.
Hultafall, £2 16s. 3d.	50 Marke Valley.	15 Wye Valley, £2¾.

To SELLERS of any of the above, or holders of any Stocks or Shares marketable, will do well to apply to Mr. BUDGE.
All bargains settled promptly.
Machinery is now at work on the Caron Mine, and ore is being crushed ready for market.

MESSRS. PETER WATSON AND CO.,
54, OLD BROAD STREET, LONDON, E.C.
BUSINESS in STOCKS and SHARES.
RAILWAYS, BANKS, DIVIDEND LEAD MINES, &c.
BANKERS: The ALLIANCE BANK (Limited).
A CIRCULAR published MONTHLY. Single copy, 6d.; annually, 5s.

MR. ALFRED E. COOKE,
STOCK AND SHARE DEALER,
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ESTABLISHED 1853.

LOWEST PRICES of MINE SHARES may be FOUND in the "INVESTORS' GAZETTE," published every Friday Evening.
Single number, three stamps; 2s. 6d. quarterly.
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Established 1853.

MR. JAMES STOCKER, STOCKBROKER,
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Mr. STOCKER Transacts Business in all Stock Exchange Securities.
[Established 1848.]
BUSINESS in the FOLLOWING SHARES:—

Chapel House, £2¾.	St. Harmon, £2½.	Colorado, 43s.
D'Eresby Mountain.	South Frances.	Don Pedro, 12s.
Dolcoath, £23.	Tankerville, £3 16s.	Eberhardt, £3¾.
East Van, £2¾.	Van, £16¼.	Exchequer.
Glenroy, 10s. 6d.	West Chiverton, £3¾.	Flagstaff.
Grogwinion, 42s. 6d.		Frontino, 47s.
Great Laxey, £15¾.	Commercial Gas.	Hultafall, £3 2s. 6d.
Leadhills, 42s. 6d.	Gas Light and Coke.	Javali, 7s. 9d.
Llanrwst, 35s.	Imperial Continental.	Last Chance, 16s. 6d.
Pandora, 11s. 6d.	National Discount.	Kapanga, 21s.
Penstruthal, 4s. 6d.	Phœnix.	Port Phillip, 11s. 6d.
Parys Mountain, 5s.	Surrey Consumers.	Richmond, £9¾.
Pateley Bridge.	Telegraphic Construct.	Santa Barbara, 32s. 6d.
Roman Grav., £6¾.	Standard Discount.	South Aurora.
Rookhope, 11s.		

BANKERS: LONDON AND WESTMINSTER.

FERDINAND R. KIRK, 5, BIRCHIN LANE, LONDON, E.C.

"THE WEEK."—A SEPARATE EDITION from that which appears in the *Mining Journal* is published every Wednesday evening, containing "Notes and Hints on the Stock Markets," with Closing Prices. May be had on application.

COLLIERIES.—Special Business in Bilson and Crump, Chapel House, Cardiff, and Newport Abercarn.

MISCELLANEOUS.—Investors should notice the low prices reached by General Credit, Hudson Bay, National Discount, Mercantile Bank, Credit, Brighton Aquarium, and Mexican Railway.

Bankers: London and Westminster, Lothbury.

MR. THOMAS THOMPSON, JUN., STOCK BROKER,
1, PALMERSTON BUILDINGS, BISHOPSGATE STREET, LONDON, E.C.

Mr. THOMPSON transacts business in every species of Stock Exchange and Mining Securities.

Mr. THOMPSON affords reliable information to investors, and can give, when desired, a list of first-class Stocks and Shares, yielding 4 to 10 per cent. dividends upon present prices.—Mr. THOMPSON'S weekly Circular may be had on application.

MR. JOHN B. REYNOLDS, STOCK AND SHARE DEALER,
70 AND 71, BISHOPSGATE STREET WITHIN, LONDON, E.C.
Established Twenty Years.
Bankers: London—City Bank.
Cornwall—Messrs. Tweedy, Williams, and Co., Redruth.

WILLIAMS AND COMPANY,
STOCK AND SHARE DEALERS, MINING AGENTS, &c.,
43, MILDMAY CHAMBERS, 82, BISHOPSGATE STREET WITHIN, LONDON, E.C.

Have FOR SALE the FOLLOWING SHARES:—

100 Aberduanant, 5s. 6d.	20 Eberhardt, £4½.	250 Penstruthal, 5s. 6d.
50 Cambrian (off. wntd.)	15 Flagstaff, 8s. 6d.	5 Richmond, £9¾.
100 Bodidris, £1 6s.	10 Gorsedd & Mer., £4½	5 St. John del Rey.
10 Carn Brea, £29.	25 Grogwinion.	25 Tankerville, £4.
25 Colorado, £2¾.	50 Hultafall, £3¼.	100 Tyn-y-Fron (off. wd.)
25 Court Grange, 17s. 6d	50 Last Chance, 16s.	5 Van, £17¾.
150 Don Pedro, 11s. 6d.	25 Leadhills.	10 W. Chiverton, £4½.
80 Devon Consols, £1½.	100 Lead Era, £2 10s.	20 W. Pateley Bridge.
5 Dolcoath, £23.	50 Pant-y-Mwyn, £5.	25 Wye Valley.
10 Denbighshire.	50 Parys Mount., 6s. 6d.	20 Yorke Peninsula.
10 D'Eresby Consols.	10 Pateley Bridge, £3¾.	

THE PANT-Y-MWYN MINE.

Rich ore has been intersected in sinking the Modlyn shaft. This is the best mining investment at present on the market, and shares should be secured at once for a great rise. Buyers and sellers are invited to communicate with us, as they will find it to their advantage to do so before dealing. We also caution our clients against giving credence to advertisements offering these shares at low prices, which are not to be had on application.

LEAD ERA.

This undertaking promises to be the next great mining prize in Flintshire. It is situated in the neighbourhood of the celebrated Minera and the Pant-y-Mwyn Mines, and, like them, the shares will quickly rise to a high premium. Investors are strongly advised to apply to us quickly, and embrace the present opportunity of securing some while they are at par.

BANKERS—LONDON JOINT-STOCK BANK.

MESSRS. ENDEAN AND CO., 85, GRACECHURCH STREET
LONDON, E.C., STOCK AND SHARE DEALERS.
Established in 1861.
Bankers: Barclay, Bevan, and Co., and London and Westminster Bank, Lothbury.
English and Foreign Stocks and Shares and all other Securities dealt in for cash or account.

LLANRWST MINE.

Special business in these shares at close prices. Buyers and sellers should communicate with us.

TO INVESTORS.

COLLIERY SYNDICATE (LIMITED).

STORFORTH LANE COLLIERY.

Before purchasing Shares or Debentures in the above, intending investors will do well to consult Messrs. ENDEAN and Co.

MESSRS. W. REYNOLDS AND CO.,
STOCK AND SHARE DEALERS,
57, GRACECHURCH STREET, AND TALBOT COURT,
LONDON, E.C.

MR. W. MARLBOROUGH, STOCK AND SHARE DEALER,
29, BISHOPSGATE STREET, LONDON, E.C. (Established 22 Years),
can sell the following SHARES, at prices annexed:—

25 Birdseye, 16s. 6d.	20 Great Holway.	60 Parys Mountain, 5s 6d
20 Blaen Canlan, £4.	10 Glenroy, 11s. 3d.	20 Pateley Bdge., £4¼.
50 Cambrian, £1 12s. 6d.	30 Hultafall, £3 2s. 6d.	100 Penstruthal, 4s. 6d.
25 Colorado, £2 7s. 6d.	30 Last Chance, 17s. 3d.	20 Roman Grav., £6¾.
20 Court Grange, 17s. 6d	20 Leadhills, £2 5s.	10 Richmond, £9 17s. 6d.
3 Cape Copper, £29½.	20 Javali, 8s.	25 Rookhope, 12s.
20 Cakemore Colliery.	25 Llanrwst.	10 Tankerville, £4 1s.
50 Don Pedro, 10s. 9d.	25 Ladywell (ful. p), 11s3	25 Tyn-y-Fron.
20 East Van, £2¾.	40 Morfa Du, 14s.	4 Van, £17¼.
15 Eberhardt, £4 1s.	40 N. Zea. Kap., £1 2s 6	15 W. Chiverton, £4.
100 Exchequer, 7s. 3d.	20 N. Quebrada, £1 13s 9	25 West Pateley Bridge,
10 East Caradon, 7s. 6d.	20 Pant-y-Mwyn.	£1 11s. 6d.
20 Frontino, £2 7s. 6d.	10 Pennant.	25 Yorke Peninsula, 8s.
50 Flagstaff, 8s. 6d.	100 Pestarena, 5s. 3d.	25 ditto pref., 16s. 9d.
10 Gorsedd & Mer. £4¼.	50 Port Phillip, 10s. 6d.	

SPECIAL BUSINESS in 50 Ligno Mineral Wood Paving Company, £5 shares, fully paid.
Shares bought and sold at net prices. Telegrams promptly attended to.

MR. CHARLES THOMAS,
MINING AGENT, STOCK AND SHARE DEALER
3, GREAT ST. HELEN'S, LONDON, E.C.

MR. ALFRED THOMAS,
MINING AGENT, AND STOCK AND SHARE DEALER.
10, COLEMAN STREET, LONDON, E.C.

"INVESTMENTS AND SPECULATIONS" for 1878,
Price Sixpence.

SAFE PROFITABLE INVESTMENTS.
Dividends 4 to 6 and 8 per cent. per annum upon outlay.
Read SHARP'S INVESTMENT CIRCULAR for OCTOBER. Post free.
It is a "Safe Guide" to Investors, Shareholders, Capitalists, Trustees.

INVESTMENTS IN STOCKS, SHARES.
For Sound Advice, Dividends, Reports, Markets, Prices, &c.,
Read SHARP'S INVESTMENT CIRCULAR for OCTOBER. Post free
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SHARP'S INVESTMENT CIRCULAR
(Post free) contains Valuable Information upon all Investments.
GOULD SHARP AND CO., STOCK AND SHARE BROKERS,
42, POULTRY, LONDON, E.C.
Established 1852.—Bankers: London and Westminster, Lothbury, E.C.

MR. EDWARD ASHMEAD, 62, CORNHILL, LONDON,
LONDON MINE AGENT, ACCOUNTANT, AND AUDITOR.

MR. E. J. BARTLETT, BRITISH AND FOREIGN STOCK AND SHARE DEALER,
No. 30, GREAT ST. HELEN'S, LONDON, E.C.

Post free, One Shilling, Eleventh Edition,
"HOW TO INVEST."
Forwarded on application.

MESSRS. EKINS AND CO.,
STOCK AND SHARE DEALERS,
14, QUEEN VICTORIA STREET, LONDON, E.C.
Bankers: Metropolitan.

MESSRS. JONES AND HOUSTON, 25, CROSBY HALL CHAMBERS, LONDON, E.C., can SELL the following SHARES at affixed prices:—

BRITISH MINES.

50 Aberduanant, 4s. 6d.	10 Great Laxey, £17½.	5 So. Wh. Frances, £5.
30 Aberllyn, £9.	2 Grogwinion, £2¼.	3) Tankerville, £3 17s 6
100 Bodidris, £1 5s.	150 North Laxey.	5 Van, £17.
5 Carn Brea, £33.	100 Parys Mount., 6s. 3d.	10 W. Chiverton, £3 5s.
20 Devon Con., £1 10s.	100 Pant-y-Mwyn.	10 W. Wye Val., £2 5s.
5 Dolcoath.	20 Pateley Bridge, £3¾.	5 Wheal Peevor, £6½.
East Van, £2¼.	200 Penstruthal, 5s.	15 W. Tankerville, 3s. 9d
	35 Rookhope, 12s.	

FOREIGN MINES.

30 Almada, 7s. 6d.	Colorado Uni., £2¾.	5 New Quebrada, £1¼.
20 Argentine, 4s. 6d.	100 Don Pedro, 10s.	40 N. Zea. Kapanga, 18s 9
50 Alamillos, £1 4s.	10 Eberhardt, £3 16s.	30 Pestarena, 6s.
10 Australian, £1¼.	30 Exchequer Gold, 7s.	50 Port Phillip, 10s.
5 Cape Cop., £29½, x. d	50 Flagstaff, 9s.	10 Richmond Con., £10.
100 Chicago Silver, £1.	20 Frontino, £2¾.	2 St. John del Rey, £275
35 Chontales, 11s.	30 I.X.L. Gold, 3s.	30 United Mexican, £4¼
	10 Linares, £3¾.	

PANT-Y-MWYN.—Advices have just been received that the lode has been cut rich at the Modlyn shaft at a great depth from surface, which is a continuation of the same lode at Griffiths' shaft, 230 yards off, from where they are making large and profitable returns of lead. We are Buyers of 100 Shares, for cash or account.
Bankers: London and Provincial.

MESSRS. J. TAYLOR AND CO.,
MINING ENGINEERS AND INSPECTORS,
86, LONDON WALL, LONDON, E.C.,
Have Agents in England, Scotland, Wales, and on the Continent.
FOR SALE, 100 VIRNEBERG SHARES, at 37s. 6d.

MR. TIMOTHY HUGHES,
MINING AGENT AND SHAREDEALER,
59, SEEL STREET, LIVERPOOL.
Reliable information given respecting Welsh and Manx Mines.

FULLY PAID SHARES TO BE SOLD, PART OF A BANKRUPT'S ESTATE:—
350 £1 Shares of the Rica Gold Washing Company (Limited).
135 £1 Shares of the Malabar Gold Washing Company (Limited).
12 £5 B Shares of the Tolima Mining Company (Limited).
40 £5 Shares of the South Aurora Consolidated Mining Company (Limited).
Apply to JOHN B. BALL and Co., 1, Gresham-buildings, E.C.

FOR SALE, each:—65 Yorke Peninsula, 4s. 3d.; 50 Don Pedro, 9s. 6d.; 50 Exchequer, 6s.; 50 South Roman Gravels, 2s. 6d.; 10 Llanrwst, 27s. 6d.; 5 West Chiverton, £3¾; 50 Rossa Grande, 2s.
Address, "Z. Z.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

FOR SALE (the whole or part):—

100 Cambrian, £2.	100 Pant-y-Mwyn, £4.	100 Morfa Du, 13s.
30 Gorsedd & Mer, £4.	40 East Van, £3.	100 Pandora, 12s.
100 Hultafall, £3.	10 Van, £17.	

Special Business, as Buyer or Seller, at fair margins in Santa Barbara, Bettws-y-Coed, Temple, and Tyn-y-Fron.
Address, H. WILKINS, 3, Heybourne Villas, Tottenham.

RAILWAY COAL TRUCKS, in good condition, and at low rates, MAY BE HAD ON HIRE FOR THE WINTER SEASON of G. E. BEVAN AND CO. (LIMITED), NORTHAMPTON or STAFFORD.

MINING AGENT OPEN TO A RE-ENGAGEMENT. Has had considerable experience in METALLIC MINING in CORNWALL and the NORTH OF ENGLAND; also 15 years on the Continent. Speaks English, French, German, and Spanish, and has had charge of mines for many years. Practically acquainted with the most modern dressing apparatus, the most economical pumping and winding engines, boring machines, smelting, and general steam and water appliances. Inspections undertaken; plans of mines and assays carefully executed. Unexceptionable references.
Address, Mr. NANCE, 23, Stanly-street West, North Shields, Northumberland.

THE SCOTTISH AUSTRALIAN MINING COMPANY (LIMITED).

Notice is hereby given, that the HALF-YEARLY GENERAL MEETING of the shareholders of the Scottish Australian Mining Company (Limited) will be HELD at the City Terminus Hotel, Cannon-street, London, on WEDNESDAY, the 30th October instant, at One o'clock in the afternoon precisely, to receive the directors' report and accounts, declare a dividend, and transact the other usual business.

The Share Transfer-books will be closed from Tuesday, the 22nd, until Wednesday, the 30th instant, both days inclusive.

By order of the Directors,
C. GRAINGER, Secretary.

50, Old Broad-street, London, 19th October, 1878.

UNITED MEXICAN MINING COMPANY (LIMITED).

Notice is hereby given, that the ORDINARY HALF-YEARLY GENERAL MEETING of Proprietors will be HELD at the office of this company, on WEDNESDAY, the 6th day of November next, at One o'clock precisely.

The Transfer Books will be closed on the afternoon of the 26th instant, and reopened on the day succeeding the meeting.

By order of the Board,
W. M. BROWNE, Secretary.

Office: No. 3, Great Winchester street Buildings, London,
18th October, 1878.

Lectures on Practical Mining in Germany.

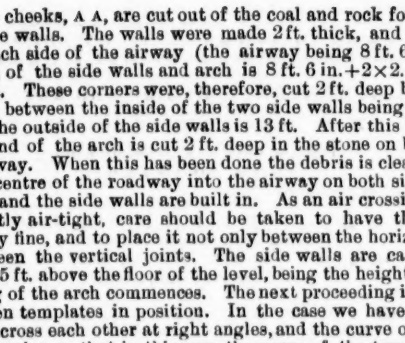
CLAUSTHAL MINING SCHOOL NOTES.*—No. XCII.

BY J. CLARK JEFFERSON, A.R.S.M., WH. SC.,
Mining Engineer, Wakefield.
(Formerly Student at the Royal Bergakademie, Clausthal).

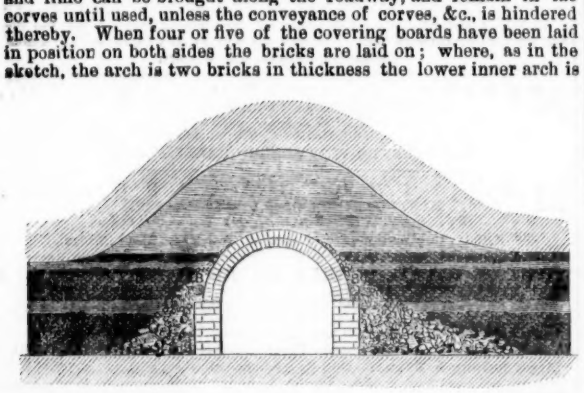
[The Author reserves the right of reproduction.]

Section V.

One of the most frequent occasions for walling in collieries is when the return air has to be carried over the intake current. The lower level must then be covered in with an air-tight archway, generally denominated an "air-crossing." The mode of building will be seen from the annexed sketch, which represents an air crossing in a bed of coal, consisting of three seams of a total height of 8 ft. The roadway is supposed to be 9 ft. in width, and the return airway which crosses it 8 ft. 6 ins. in width. The top of the level is blown down so that at the centre where they cross the total height above the floor is about 16 ft. to 17 ft. This excavation in the roof of the return airway inclines downwards on both sides of the roadway, becoming level with the roof of the return airway, giving the roof an inclination of 12° to 15°. After that the four



corners or cheeks, A A, are cut out of the coal and rock for the ends of the side walls. The walls were made 2 ft. thick, and projected 2 ft. on each side of the airway (the airway being 8 ft. 6 in. wide, the length of the side walls and arch is 8 ft. 6 in. + 2×2. ft. = 12 ft. 6 in. long). These corners were, therefore, cut 2 ft. deep both ways, the width between the inside of the two side walls being 9 ft., that between the outside of the side walls is 13 ft. After this the recess for each end of the arch is cut 2 ft. deep in the stone on both sides of the airway. When this has been done the debris is cleared away from the centre of the roadway into the airway on both sides of the roadway, and the side walls are built in. As an air crossing should be perfectly air-tight, care should be taken to have the mortar sufficiently fine, and to place it not only between the horizontal but also between the vertical joints. The side walls are carried to a height of 5 ft. above the floor of the level, being the height at which the spring of the arch commences. The next proceeding is to place the wooden templates in position. In the case we have supposed the roads cross each other at right angles, and the curve of the arch is semi-circular, so that in this case the curve of the template will be likewise semi-circular, with this difference, however, that the radius of the template will be less than that of the arch by the thickness of the covering boards. The covering boards are usually from 4 ins. to 5 ins. broad and 1 in. thick, so that in the case we have supposed, where the radius of the arch is 4 ft. 6 ins., the radius of the template will be 4 ft. 5 ins. The templates are usually supported on pillars made by piling some of the loose bricks crosswise upon each other, and which must be the height of the side walls. The ends of the templates rest upon these pillars, the templates being placed from 3 ft. to 4 ft. apart, and are connected and held apart by nailing slight laths to them. The covering boards are then laid on the templates; it is better to lay each separate covering board on singly by itself as the work proceeds, since the bricklayer has then more room, and can work more conveniently. The bricks and lime can be brought along the roadway, and remain in the corves until used, unless the conveyance of corves, &c., is hindered thereby. When four or five of the covering boards have been laid in position on both sides the bricks are laid on; where, as in the sketch, the arch is two bricks in thickness the lower inner arch is



kept two or three courses in advance of the outer one. At some convenient time during the work two long timbers, B, the whole length of the arch (12 ft. 6 in.) are introduced in the position shown in the sketch. Before the covering boards are laid on the templates preparatory to laying the crown crosses, the bricks and mortar should be introduced (in sufficient quantity to complete the work) into the return airway. Before putting in the crown courses some arrangement should be made to preserve the ventillating current in a proper direction—*i.e.*, to change the doors and sheets should it necessitate a reversing of the ventilating current. After the arch has been completed any spaces in the recess cut for the arch on each side of the airway between the brickwork of the arch and the under side of the arch of the recess is filled up by laying or building bricks tight into it, and which also serves to keep the ends of the arches air-tight. The arch is then pointed on the inside, and sometimes also on the outside, to keep the arch air-tight. A singing noise will indicate the position of any joint which is not air-tight. After this, or already previously on the completion of the side walls, the debris is piled against the arch in the manner shown in he sketch.

It is by no means unusual that the air-way crosses the road-way obliquely, and the arch will then form what we have termed a skew arch. If the obliquity is very great the templates may be made semi-circular; they must, however, then be placed at right angles to the axis of the arch (of the roadway), the covering boards being pushed more forward on one side than on the other. It is best, however, to make the templates so that they can be placed in the direction of the air-way; and in this case they will form not semi-circles but semi-ellipses, the minor diameter of which is equal to the distance between the two side walls when measured at right angles to them—*i.e.*, it is equal to the width of the roadway, the major diameter being equal to the distance of the walls apart measured in the direction of the air-way. The readiest mode of forming the elliptical curve for the template of any skew air crossing will be as follows:—The curve is generally drawn on the wooden floor of the carpenters' shop, and the template made to it. A string is taken of the length equal to the major diameter of the ellipse, as given above. A line is drawn on the floor to represent the major diameter, and from its centre, and at right angles to it, a short line is drawn, equal to the semi-minor diameter. At the end of this line the centre of the string is held until the two loose ends are pulled tight, so that they are on the major diameter in two points, one on each side of the centre, where the ends are fastened to a pin or nail. A pencil is then pressed against the inside of the string, keeping string tight, whilst the pencil is drawn on the floor of the shop on both sides of the centre line, till it cuts the line representing the major diameter, which it will do at the ends.

For semi-circular arches of air crossings with the same radius, though of different skews, the same elliptical template will suffice if the precaution be taken to place the template at the same inclination to the axis of the roadway as that of the airway to the roadway in the first case, for which the template was made. The elliptical template made for the arch of an air crossing of one width or given radius will not suffice for that of another radius; the resulting arch would not be semi-circular, but flat at the crown where the skew was greater, and flat at the sides where it was less.

Another case of importance for collieries is the building of the pit porches. Generally speaking, the excavation of the ground for the purpose presents few difficulties, and the brickwork is chiefly distinguished for the great thickness used. The shaft is made to enlarge near the bottom from the ordinary size of the shaft to a circle, the diameter of which equals the span or width of the porch arches. Where the ground, however, is of a very friable, loose, or quick nature, and the coal seam comparatively thin, or that the entrance from the shaft to the mine is in rock and not in coal, the building in of the porches becomes a work of some little difficulty. In such a case we have to consider the mode of excavating, or the opening out, of the ground from the shaft to make room for the porches, the timbering of the ground until the brickwork can be put in. Some such method is also used in the driving of railway tunnels, which when of great length are not only driven from the ends but also from intermediate shafts sunk purposely.

Supposing the shaft has already been sunk to the coal seam, and is properly lined with wood (cribs and piles). At the height of the crown of the porch arches a few of the piles are taken out on both sides, and two headings, 5 ft. high by 3 ft. wide, are driven at this height 10 ft. to 12 ft. into the ground. The roof of this heading must be at a suitable height above the floor of the porch, so that there is room above the top of the soffit for the brickwork, timber, piles, &c. A ledge about 3 ft. deep and 18 ins. high is then cut close to the roof at one side of the heading. A long bar (which for this purpose is generally so long as to require two pieces scarfing together to obtain the proper length) is introduced into the headings, and laid on the ledges we have just mentioned. At the ends of the headings, underneath the ends of the long bar, a vertical slit is excavated, so that a prop can be introduced under each end. Both props are footed on boards. The long beam is also strutted on both sides of the shaft from one of the shaft frames. A second ledge is excavated in a similar manner on the opposite side of each of the two headings, and a long bar is introduced, and similarly secured by props at the ends, and struts from the next shaft crib. The top of these bars are covered by flat boards, to prevent the ground breaking through between them; similarly the ends of the heading may require protecting. The ground thus cut off can now be excavated and removed. The ledges on each side of the headings are again cut deeper, and in the direction of the curve of the arch. When the ledges have been cut deep enough the long longitudinal bars are introduced, and by excavating slits large enough to introduce props beneath the ends of the bars they can be supported at the ends as well as from the shaft frames or cribs. The longitudinal bars are kept at the proper distance apart by inserting five or six struts between each bar. After this the ground thus cut off is excavated, and if necessary the space in the roof between the bars is covered with planks. In this manner the whole of the ground on each side of the pit enclosed by the exterior arching of the porches, and the level of the feet of the props supporting the ends of the bars is recessesed 12 feet deep, and bar after bar is similarly inserted, propped and strutted, the covering boards or piles following the contour of the extrado of tunnel. When this has been done a long rectangular beam of wood called a sill is placed close to the feet of the props and rests upon the ground immediately in front of the props. The ground may require a slight dressing before the long sill can be placed in position. The ends of the bars are then supported by props resting on the sill, and wedged tight against the underside of the bars, after which the first set of props are removed, and the whole weight of the roof on the ends of the bars comes to rest upon the sill. When the first or top sills have been thus fixed the excavation of the ground beneath is commenced with by driving a central heading on each side beneath and corresponding to the previous top heading. This is driven sufficiently far to cut two slits (one on each side) in which props footed on lids are strutted and wedged tight against the underside of the first sill. In a similar manner by first cutting slits and inserting props against the underside of the first sill, and then excavating the detatched mass, the whole of the ground between the first sill and a second is excavated, the sides following the contour of the extrado of the tunnel. After this the second sill is introduced and laid close against the feet of the props supporting the first (top) sill. By means of temporary inclined props the top sill is secured whilst the first props are removed, and the second sill placed vertically under the first, after which the permanent props are inserted between the two sills. The whole of the earth has thus been removed down to the level of the second sill. The foot of the next central heading may come down to the level of the skewback of the inverted arch. The ground is excavated in a similar manner with the insertion of props footed on strong lids, and wedged tight against the under side of the second sill. After the ground has been excavated in this manner the templates for the brickwork are placed in position. and the covering laths attached.

In the case of nearly vertical lodes, and with a pressure chiefly from the sides, a double arch is sometimes used, aed corresponds to a row of stempels. The double arch is formed by building an inverted arch on the top of an ordinary arch in such a manner that the crowns of the two arches touch. The space at the sides between the two arches is made solid with brickwork. The arching seldom includes an angle at the centre from which it is drawn greater than 60°. Occasionally in slate districts a road may be seen with a high retaining wall on each side, which have been commenced on too weak a scale, and have been prevented frem falling in by double arching. When two arched roads cross each other, the arching of each is continued to the centre where they cross, narrowing, however, to a point at this place, the joints of the brickwork forming two lines crossing each other at the centre. Sometimes one of the arches may be carried right through, the sides of the arching at the crossing abutting against the ends of the arching of the cross road. The ends of the arching must be made slightly inclined to form suitable abutments.

In collieries it often occurs that two roadways diverge from each other, or rather come into each other at a comparatively acute angle. In this case the pillar of coal between the two may become so thin that it will not serve as a support for the roof nor as a stable abutment for the brick arching of the two levels. In this case the coal pillar or post is entirely cut away where it is less than 4 ft. to 6 ft. in thickness, and is replaced by a brick wall, which runs forward tapering to 1 ft. in thickness at the end. At this place the two roads join and form one, which is here more than double the width of the single roads. The roof is, therefore, supported at this place by a stronger arch of one span. In roads or drifts passing through slate or clay, or other ground which is greatly affected by the weathering action of the atmosphere, it is advisable to brick the level at once, since the air may be immediately cut off from the exposed surface, and a swelling of the clay or loosening of the shale would be prevented, and which might otherwtse require a wall of considerably greater strength. According to Lottner, the macadamising of the levels has been resorted to to prevent the swelling of the clay in the floor, and has answered well in the brown coal mines—Buest and Richard, near Grüneberg, and in the copper mine Hoffning, near Eisleben. At other places this device,

* Being Notes on a Course of Lectures on Mining, delivered by Herr Bergrath Dr. Von Groddeck, Director of the Royal Bergakademie, Clausthal, The Harz, North Germany.

COAL FIELD OF THE STORMBERGEN, SOUTH AFRICA.

BY FRED. W. NORTH, M.E., F.G.S.

[Read at the South Staffordshire and East Worcestershire Institute of Mining Engineers.]

The coal field of Cape Colony is of a triangular form, the base of which may be said to be from a point near Bamboe's Berg through Buffell's Kloof Farm, near Bushman's Hock, Buffalo Thorns, Theodorus Rand, trough the Tambookie location to the Indive river on the south; having the Wittebergen, in the district of Herschel, as its apex to the north-east. British Basutoland and Kaffirland form the eastern boundary of the coal field, as well as of the colony, under which territory the coal deposits probably continue all the way to Natal.

Outside both of the north-eastern and the southern side of the triangle it is quite possible, and indeed very probable, that isolated patches of coal may be found in the high mountains that are near the edge, but occasionally a long distance removed from the area taken as the coal field proper; wherever they may be found, I can only consider them now as detached fragments of the original coal field, from which they have separated, and doubtless the coal damaged by denudation.

The total area of the coal field within the colony—estimated as near as possible, without positive proof of the precise line from actual working, and adopting straight lines near the boundary instead of the zigzag course it is sure to take when actually exposed—will be about 2,500,000 statute acres, under the greater part of which the coal indications should exist beneath both mountain and valley, provided that they are both sufficiently elevated above the sea-level to contain them; but often the coal seams will be found in the mountains, but not beneath the valleys, because denudation has removed them from the latter.

The surface of the whole coal field is of a most undulating and mountainous character, having the Wittebergen Mountains, in the district of Herschel, and the Stormbergen range within its area. The highest summits of these mountains are probably 7500 to 8000 feet above the sea, whilst the lowest valley or plain within the coal field may be taken at 4000 ft. or thereabouts.

Now, in speaking of these mountains it must not be thought that they rise abruptly on either side, forming rows of elevated ground, with an occasional pass or mountain peak, but rather that they form bands of irregular and undulating country of considerable widths, being about 50 miles wide, along a line due north from Buffalo Thorns to Plaat Kop, in the field-cornetcy of Klip Sprint—the former being on the southern and the latter on the northern boundary of the coal field, and from point to point the country is nothing more nor less than a succession of mountains and valleys.

Within this band of country we have hills and valleys of every conceivable shape, some with sugar-loaf peaks, and some with flat tops of igneous rock or massive sandstone, which now and then flank their summits with vertical precipices 400 ft. or 500 ft. in height. Then, again, a freak of Nature will have so played with the sandstone or igneous rock as to appear in the distance like the castellated turrets of a noble baronial ruin or, perhaps, a lion couchant, whilst the slopes from summit to base are often strewn with blocks of rock detached from the terraces above. Many of these rocks, several hundred tons in weight, have at some period or other thundered down the mountain side to the site upon which they now rest.

Standing upon one of the mountain tops one looks around, and can only see mountain after mountain, setting in all around and behind each other, and usually the horizon is formed by the contour lines of the mountains, apparently touching each other as the shoulder of the one cuts down and meets the rising outline forming the shoulder of its neighbour, and so completely shuts out any view of the plains beyond. Within this area there are many smaller mountains and kops, irregularly rising from fertile plains and valleys. It is very needful to remark this, because often, and particularly upon the edge of the coal field, these valleys have had the whole of the coal denuded from them; and, although the present Geological Map of the Colony is necessarily coloured all over the area as the coal field, it is only the elevated ground in such positions that contains the carboniferous deposits. This, then, is the average appearance of the future coal fields of Cape Colony.

With such an irregular surface, even a well-travelled man (not a geologist) may be forgiven if he imagined that all this chaos and irregularity of outline had been caused, as in many other mountain ranges, by violent upheaval of the earth's crust, and that, consequently, any stratified material like coal would partake of all these contortions, and be found beneath at every conceivable angle, only a small percentage of the whole remaining in its original horizontal position. But the most casual observation of the geologist as he glances at the mountains, and sees in every one of them level terraces of rocks rising tier above tier with bluff krantz or rough ridge dividing sloping belts of grass, convinces him that the general stratification of the country is horizontal or nearly so, and, consequently, the coal, whether it lies beneath the valley he travels through, and, therefore, beneath the whole country within sight, or only in the mountain sides and only within that particular zone of elevation upon the surrounding mountains, will at least be level, and well adapted to mining economy

It is very noticeable on the mountain sides that the general composition of the surface consists of alternate layers of hard and soft stratified material, the harder having best withstood the destroying influences of denudation and decay, while the more perishable deposits have softened down into intermediate grass-covered slopes. This even, almost level, stratification is wonderfully persistent over a very large area. In several parts of the coal field, however, anteclinal faults occur, with strata dipping on either side of it in a reverse direction, and clean-cut faults, with an immediate elevation or depression of the strata, also exist as in all other districts; but nothing of the kind occurs that will be any obstacle to practical mining, and it will be chiefly from the innumerable dykes of igneous rock that the miners in various parts will meet with their greatest difficulties, and those will not by any means be serious ones.

The exhibition of intrusive rock is everywhere prevalent, here and there to an enormous extent, outbursts of igneous rock overlying hundreds of acres; but, as usual with these eruptive rocks, they have been forced to the surface through cracks in the earth's crust, and, although passing through, do not often elevate or depress the strata on either side. Therefore, although these intrusive rocks are everywhere prevalent, it will be possible to select many places where whole farms will be free from their influence, and where mining can be carried on for many years without being affected by them. Seeing that the general lie of the rocks is nearly horizontal, that volcanic agency has not to any great extent disturbed them from their original position, that the present irregular contour of the surface over hundreds of square miles must be attributed to other than plutonic influence, that the rocks and shales in one mountain can invariably be correlated with all the others in the neighbourhood, it is evident that the corroding influences of time and denudation have scooped out the ravines and valleys. Without speculating as to how much higher the land was originally deposited above the top of the highest of the mountains, and how many more seams may have then existed that are now swept away, we may for a moment contemplate the immense excavation needful to make this portion of the earth's surface and its present shape, and try to grapple with the problem of the length of time required for this immense work to be performed by the various denuding and disintegrating agencies.

In the examination of what we are in the habit of calling a "new country" we have not the advantage to be derived from the numerous openings beneath the soil which elsewhere present themselves in the shape of pit-shafts, railway and canal cuttings, tunnels, well, water-courses, &c., and consequently much labour and time are required to make such an investigation as shall foreshadow the future of so large a coal field as the one under consideration.

The coal at a farm known as the Camp, near the Indive river

first attracted attention during my stay in South Africa. It is situate at the south-eastern corner of the coal field, and, as the whole country thereabouts is thickly populated with Tambookie Kaffirs, it is a wonder that they or some of the traders had not found out these "stones that burn," because the bare coal at the "outcrop" is so noticeable for 400 or 500 yards beneath a horizontal ridge of sandstone rock at the foot of the mountain. Having selected a suitable point I decided to open up the coal here, so that I could obtain all needful information as to the cost of working such a seam with the available labour, as to the quality of the coal, the cost of transport, and the demand within the surrounding district for the fuel when extracted.

Queenstown is the most advanced point of the railway-works in the direction of this coal field, and at the outset I felt sure that whatever may be the result of the explorations no decided success could be obtained in coal mining until communication was provided with the colonial railway system. The rough section of the nearest route from the Camp Coal Mine to Queenstown, a distance of about 40 miles, shows approximately the kind of country to be traversed by such a railway extension.

In examining this Indive coal seam upon its own merits and intrinsic worth, compared with the other known coal fields of the world, one is somewhat given to disappointment, and it is only when one considers its geographical position that its great redeeming quality is recognised. The following sections, taken at the front and end of the heading, when driven 120 ft. horizontally into the Indive coal, show the component parts of the seam laid down to scale, by which can be seen the changes in the coal and shale between the entrance to and the back of the heading. These sections are very explanatory of the changeable nature of the seam, and, fearing that it would not be a continuous one, and that in a few miles it would cease to exist, I caused various measures to be adopted for the purpose of proving the area to be relied upon from it in this locality, resulting in the sections Nos. 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13.

These operations to prove a large area were essential because of the isolated position of the discovery, and the certainty that if the coal is to be largely and profitably worked railway accommodation, involving an outlay of some 250,000*l*., must be provided; but, of course, this proposed railway would also tend to the further development of the colony, and could not under any circumstances be placed to the debit of the colliery only. Any such expenditure —involving a first charge of 12,500*l*. per annum for interest upon the outlay for the railway works alone, in addition to all the legitimate expenditure for colliery purposes—would certainly result in much disappointment, if not in actual loss, and, therefore, such an outlay should not be incurred except with the view of opening up another portion of the colony.

The thick mass of shale in the centre of these sections near the River Indive will, I fear, be characteristic of them, and will prevent the lower beds of coal being worked, and, therefore, they must be omitted from any calculations as to quantity. The bed of coal immediately beneath the mass of shale is also so interstratified with hard stony earth that it has no commercial value, and I am of opinion that only the upper portion of the seam shown in these sections will be available for use, and that will average 2 ft. 6 in. of coal of usual quality. The coal seam at the end of the heading driven 120 ft. to prove it contains 5 ft. 2 in. of workable coal. It is moderately bituminious, and consists of several distinct beds, divided by layers of hard greyish-brown shale. The beds of coal contain much earthy matter—they are laminated, black, and have a glistening lustre, except where a dull black patch or streak denotes a larger proportion of inorganic matter. They differ from each other as to hardness, specific gravity, ash, and in many minor qualities—such as cleavage, fracture, &c. When all the coal is carefully cleaned from all loose shale and dirt, and mingled together, it ignites freely and burns slowly, like the consumption of a semi-anthracite, makes a bright fire, with short flame, little smoke, gives off considerable local heat and little sulphur.

Having noticed the coal field at its south-eastern corner near the Indive river, where the country is inhabited chiefly by Kaffirs, we will now look at its south-western extremity near the little town of Moltens, where the first attempt at a colliery in South Africa was made by Mr. Geo. Vice. The neighbourhood is about 70 miles west of the "outcrop" last referred to; and within the limits of this paper it is impossible to notice the various indications that exist between the two points, except the boring at the town of Dordrecht, where I hoped to find the workable coal at about 350 ft. from the surface—but unfortunately the outbreak of the Kaffir war unsettled all the native tribes in these frontier towns—and at a depth of 164 ft. 5 in. It was discontinued until the end of the disturbance, because my natives deserted their work and joined their respective chiefs.

The whole of the country round about Moltens has been occupied by farmers or "boers" of Dutch extraction for many years, who, in the early days of the colony secured farms of 6000 or 8000 acres by paying a nominal annual quit-rent to the Crown. This annual payment entitles the owner to all the minerals except precious stones, and, although the Dutch boer is not a very enterprising gentleman, there are some exceptions, and in some instances the owners have exposed outcrops of coal, which are all thin seams invariably lying level, and having good "roof" and "floor." Some of these farmers have even worked a few tons of their coal; but, as the consumption at present is so small, and the prejudice against such fuel in the rural districts so great, their explorations generally ended before they had worked far enough from the outcrop to obtain the best of it.

(*To be continued in next week's Journal.*)

IMPROVEMENT IN WINDING COAL.

It has hitherto been usual in the loading and unloading of the cages to run the wagons on and off by manual labour, but Mr. Henry Fisher, of the Clifton Colliery Company, Nottingham, now proposes to perform the work automatically, and he claims that he can perform the operation more speedily than by manual labour. For this purpose he causes the rails of the cage either at the end or preferably between the ends to be hinged or swung on axles and bearings, or by other suitable means, and provided at one end with feet or Z-pieces and the other, where the rails are swung between the ends, with suitable resting levers and links or other suitable means, in such a manner that when the cage is set down on the props or other usual supports the rails of the cage are tilted or inclined to such an inclination as to cause the wagons or trams to run off the rails or platform. The wagons are held in position on the cage when winding by stops, which are lifted up to allow the wagons to run off the cage. The rails or platforms on the cage work, or are swung, on the axles and bearings in such a manner as to right themselves from the position assumed when the cage rests on the supports to their normal position when the cage does not rest on the supports, and springs may be used to reduce the concussion of the cage when it is being rested on the supports, and to assist the rails or platform to assume its normal position.

Simultaneously with the cage resting on the supports and tilting or inclining the rails, it presses down a tappet rod, which is connected with and gives motion to an L-lever or crank, to which is connected one end of a rod, the other end of which is connected to a tap, cock, or other suitable valve or slide, and by this or other suitable means the valve or cock is opened and admits steam, compressed air, water, or other fluid (under a pressure) through a port or pipe to a suitable cylinder, either oscillating or fixed, preferably the former, in which case the cylinder is swung or oscillates on trunnions or other suitable means. The cylinder is fitted with a piston and rod, the upper end of which is attached or connected by suitable means to a cross head or other appliance connected to the rails or platform upon which the wagons or other articles to be placed upon the cage are run. These rails or platform are connected to the ends of four or other number of levers, the other ends of which work on rocking shafts placed in such a position to each other that when the piston is acted upon by the steam or other fluid or pressure the levers and rails or platforms are raised to an inclined position in a line with and at the same angle as those on the cage when resting on the supports, and by this means the wagons or other articles are run on to the cage. The cylinder is provided with a pneumatic or other elastic cushion at the upper end to prevent the piston striking the top cylinder cover. When the cage is raised from the supports a weight or spring attached to a lever of the valve falls or springs back, and closes the admission port to the cylinder, and at the same time opens the exhaust port of the valve or cylinder, allowing the piston with the rails and platform or apparatus to fall to the usual level required to enable more wagons or articles to be run on for loading.

In place of raising the rails or platform carrying the wagons or other articles to be run on to the cage by a cylinder and piston, it may be raised by an arrangement of lifting levers actuated by the cage itself in such a manner that when the cage is set down on the supports it rests at the same time on and lowers the end or ends of one or more levers which work on rocking shafts, and raises the other end or ends which are connected to or bear against the levers carrying the rails or platform by connecting links, or truck, or other suitable appliance, and by this means raises the rails or platform to the required position or inclination to enable the wagons or other articles to be run on to the cage. In place of raising the rails or platform carrying the wagons to be run on to the cage, for the purpose of running them on to the cage the wagons may, as is now sometimes practised, be brought to rest on a permanent incline, from which they can when desired be allowed to run forward on to the cage by removing stops which previously held back the wagons.

THE YORKSHIRE COLLEGE—LECTURE ON COAL MINING.

The introductory lecture in the Coal Mining Department of the Yorkshire College—which department is maintained by the Draper's Company of the City of London—was delivered on Monday in the Leeds Philosophical Hall by the instructor, Mr. Arnold Lupton, Mem. Inst. C.E., F.G.S., mining engineer and colliery manager. Mr. Richard Carter, F.G.S., Barnsley, president of the Midland Institute of Engineers, presided; and among those present were Mr. F. N. Wardell, Her Majesty's Inspector of Coal Mines for Yorkshire; Prof. Green, principal of the Yorkshire College; Mr. Wheelhouse, M.P.; Mr. Joseph Mitchell, F.G.S.; Mr. F. H. Pearce, vice-president of the Midland Institute; Mr. W. H. Peacock, F.G.S., the secretary; Mr. James Beaumont, Mr. Walter Rowley, Mr. Joseph Lupton, Mr. H. Wood, Harrogate; Mr. Jerrard, Wakefield, &c.

The Chairman, in opening the proceedings, said they were assembled for the purpose of commencing the second of a series of lectures in the Mining Department of the Yorkshire College, by means of which persons who intended to become connected with coal mining would become qualified for the professional positions they were seeking to obtain. He apprehended it was not the intention of the College to confine its attention to coal mining only. Yorkshire presented other mineral features of extended importance. It was, indeed, a sort of representative kingdom. Its commercial and mining industries, its agricultural and its artistic characteristics, almost entitled it to imperial importance. True, in Leeds and the immediate neighbourhood coal was of primary importance, but to the north-west of the town lay rich treasures of lead, and he knew not what other mineral characteristics, with which they would have to make themselves familiar. Therefore it was that these classes assumed such importance, and therefore it was that he was glad that the lectures were being delivered by a lecturer so well qualified to guide young men to the acquisition of such knowledge as would enable them to compass the requirements of a mining education. In the neighbourhood of Leeds the coalfield was to a considerable extent exhausted, but if they crossed the valley of the Calder and got into the South Yorkshire district they found a field which they might safely pronounce to be almost illimitable. It was only within a very few years, nay months, that facts were elicited which enabled them to speak of the South Yorkshire coalfield as one of the grandest sources of mineral wealth that could be found in this or any other country. Some time ago a Royal Commission was appointed by Parliament to make some estimate of the mineral resources of the country. If that commission had to sit to-day there could be no doubt it would extend by many score square miles the mineral treasures of South Yorkshire beyond what it was enabled to arrive at when the former report was made. Seeing the coal mining interest was, therefore, likely to be identified with the district for many years to come, he could not but congratulate all who were connected with that interest upon the establishment of these lectures. The process of qualification for a colliery manager was very much more difficult now than it was some years ago, and the classes would prove a great boon to those who were desirous of fitting themselves for such an occupation. At the present moment it appeared as if a flood of light was about to be thrown upon that most difficult question, the lighting of mines. Within the last few weeks an ingenious and industrious gentleman across the Atlantic had claimed to have succeeded in discovering a means of dividing the electric current so as to give a division of light which was represented as amounting to almost infinitude. He did not say that the problem of creating light without creating danger had been solved, but the importance of a solution of the difficulty could not be over-valued. In conclusion, the Chairman hoped the classes would be even more successful than they were in the first year of their existence, and that in time they would have added to the profession of mining engineer and manager a number of men equal to the duties imposed upon them, and in whose hands the mining interests would be perfectly safe. (Applause.)

Mr. Arnold Lupton, in the course of his lecture, pointed out how important a matter ventilation was in the management of a colliery. In the course of his remarks on this subject he stated that we ought not to be too hard upon our forefathers for their ignorance and neglect in this respect, for it must be remembered that good ventilation in our private houses, public buildings, and factories was even now the exception and not the rule. There could be no doubt that tens of thousands of Englishmen perished miserably on the surface of the earth every year in consequence of the prevailing ignorance and carelessness in every class on the subject of ventilation. If an investigation were made into the ventilation of most of the collieries where explosions had occurred it would be found that they were laid out upon systems which made it impossible to secure an adequate amount of ventilation. Nothing was more dangerous than to drive headings quickly into a fiery seam of coal, and having gas behind the men was a fruitful source of explosions. Some people thought that if the use of gunpowder was prohibited in mines accidents would be prevented. That that view was an incorrect one was proved by the fact that out of an average of 235 deaths per annum for the six years ending 1875 caused by explosions of all kinds, not more than 70 could be fairly attributed to the use of gunpowder, or about 29 per cent. Gunpowder and similar explosives were necessary for successful mining. After these general remarks on the subject of ventilation, the lecturer proceeded to describe some mechanical devices employed in coal mines. Amongst these was Mr. Grafton-Jones's hydraulic hammer wedge; the little locomotive made by Mr. Lishman, of Bunker's Hill, in Durham, and which was driven by compressed air; and the Kind-Chaudron system of sinking shafts through measures containing water, without a single man going into the pit. The pith of the invention was a "moss box" for joining the iron cylinders. This machine was extensively used, and but for it many of the French pits now in use would have been undeveloped. Two pits were being sunk on the system in England, one at Cannock Chase and the other in Durham. It was said that 120,000*l*. had been spent in trying to sink the latter pit, and that now in all probability it will be completed for 14,000*l*.

Mr. Wheelhouse, M.P., in proposing a vote of thanks to the Chairman, said whilst the Legislature had to deal with mines and mining, and mining agencies in a way that would cause a proper supervision to be exercised over everything connected with the trade, they were exceedingly careful not to hamper the trade either so far as the masters or men were concerned by over-regulation. There should be not a paternal but a useful and strong supervision in matters of this sort. It was not merely the duty but the pleasure of the Legislature to take care of the lives of those who followed an occupation dangerous in itself, but at the same time they ought not to take any steps unless they were perfectly clear that they were alike fair and just to both masters and men. (Applause.)

Mr. F. N. Wardell seconded the vote of thanks.

The Chairman, in responding, said the mining interest asked for no favours and for no concessions, and he hoped that when they went to Parliament, as they would be sure to do next session, in defence of their interests, the whole Legislature would give them that fair and impartial enquiry and investigation which Mr. Wheelhouse seemed prepared to give. (Applause.)

ACCIDENT COMPENSATION TO WORKMEN.

In an interesting article in the Times upon the subject of Compensation to Railway Servants and to workmen employed in various capacities, the Times very properly exposes the failure of Mr. Macdonald to induce the railway servants to allow him to interfere with their subjects of complaint, and it has now become a general feeling not only amongst employers of labour but also among workmen that the gentleman mentioned is one of those who has done his utmost to estrange the working man from his master, and, unintentionally it may be, damage the interests of the working man and the trade of this country. But the question at issue between the railway servants and their employers is one that involves so many considerations that one can scarcely be blamed for coming to false conclusions concerning it. With regard to liability to accident from the negligence of fellow-workmen railway servants are really in no worse a position than the workmen engaged in many other dangerous occupations, and are certainly in a better position than miners of every kind, so that to attempt to deal with the question other than as a general one appears unfair.

Much that the Times says in favour of railway servants is applicable to miners also. Their occupation, it is remarked, is an extremely dangerous one, and they are exposed while they are on duty to accidents of a thousand kinds. Some of them they have it in their own power to guard against, but there are others over which they have no control, and as to these they must simply take their chance. They are peculiarly liable to suffer not only by their own faults, but by the faults of their fellows. If there is any class on which the law of common employment presses hardly it is on the railway servants. The plate-layer is in the employment of the same masters as the engine-driver who disregards signals and runs over him. The station-master who gives improper orders and the porter or shunter who obeys them at the risk of his life are similarly in a common employment. The law, therefore, will give no damages to the sufferer or to the family which was dependent on him, and which he leaves unprovided for at his death. The objections to such a state of things are obvious. They have been brought more than once before the notice of the Legislature; they have formed the subject of a special parliamentary report; and they have been discussed over and over again—almost as often, indeed, as any body of working men have met upon business of any kind. The railway servants ask, continues the Times, not that the law of common employment shall be swept away, but that it shall be modified in a way to which Parliament has shown signs that it may be found willing to consent. Their wish is that where authority is delegated by an employer, the employer shall be made responsible in damages for the acts of his representatives. To a demand of this kind the attention of Parliament may be reasonably asked, and it will find support which would be refused to the root and branch measures of which Mr. Macdonald is the spokesman. At the late Bristol Congress it was amusing to observe how angry Mr. Macdonald was with the powerful order which declined to take him as their leader, or to join their voice with his for the impossible changes of which he has made himself the parliamentary advocate. We fear he will not be much better pleased with the railway servants at Liverpool than at Bristol. The Secretary of their Society thinks it extremely unfortunate that the working men of this country have intrusted their interests to one so injudicious and indiscreet as Mr. Macdonald has proved himself to be. The President of the Society, Mr. Macliver, follows in the same strain. He regrets that any portion of the working men should be under the influence of a gentleman so totally unfitted to serve them, and declares that, but for the fact that Mr. Macdonald is a member of the House of Commons, the remarks he was unwise enough to make at Bristol would be quite unworthy of consideration. The railway servants have friends on whom they can rely for more safe guidance, and who have more influence with the House than Mr. Macdonald can command. When Mr. Brassey, Mr. Bass, and Mr. Plimsoll are with them, it can be a matter of no great consequence how severe may be the verdict which Mr. Macdonald may pronounce.

It cannot be doubted that in all dangerous employments those engaged in them become so accustomed to the dangers by which they are surrounded that they get careless of them, and upon this ground alone it might be argued that the removal of the restriction which prevents a workman claiming compensation from the employer for injury caused by the negligence of a fellow-workmen is unlikely to lead to increased safety; and it is even doubtful whether much advantage would result from making the employer responsible in damages for the acts of his representative further than to compel the employment of the most approved machinery and the safest system of working, and this could usually be enforced under the existing law. The fact must not be lost sight of that vastly increased safety was anticipated from the introduction of the system of certificated managers in collieries, but that in practice it has been found that there has been really no improvement, whether taken at the number of deaths per annum per 1000 men employed or in the number of tons of coals raised for each life lost. The true remedy for the unnecessary loss of life in connection with dangerous occupations would appear to be the improvement by education of the entire mass of workmen, and the teaching of them that the welfare of themselves and of their fellow-workmen should be their constant care; whilst with regard to those accidents which may be regarded as unpreventible, the most that can be done is to establish workmen's insurance funds, to afford compensation in the event of accident or injury. It is, perhaps, going to far too say that "it comes really to much the same thing whether compensation be given as a legal right or whether it be paid out of wages, since if it were given as a legal right wages would be correspondingly reduced, and it is from wages, therefore, that either directly or indirectly it must come," but that accident insurance funds, administered by the men themselves, are desirable cannot be questioned.

The usual complaint among employers is not so much that the men are overpaid, but that the same class of work as formerly can scarcely be obtained at any price, and the more intelligent class of employers have also learnt that no advantages result to them from employing their workpeople long hours for small pay, since experience has proved that workmen cannot, even if they had the inclination, perform more than a certain amount of work per annum whether they work eight or twelve hours per day, and also that the amount of work performed is almost exactly in proportion to the wages paid. The special dispute between the London and North-Western Railway arises out of a change which has been made, by which henceforth the men engaged in the train service are to be paid not by time but by the trip, and the men, not unnaturally, urge that this is likely to make men careful only to get each trip done within the minimum time allowed for it, and reckless about everything else; but, as the Times remarks, the company in question is one of the best managed in the kingdom, and it is hard to believe that its directors should not only have treated their servants unfairly, but should also, as the further complaint is, have imposed upon them a system which reduces their pay, and at the same time unduly lengthens the hours over which their work extends. There is no kind of work in which a man more needs to be at his best than that which railway servants have to do. If the hours are excessive the work will be inefficiently performed. The engine-drive or signalman who is kept too long at his post will be sure, sooner or later, to be found failing at some important moment in duties which he has become simply unable to discharge.

In this respect the position of railway servants is not widely different from that of miners and other workmen; they must be

both well paid and well treated, and their best services may then fairly be demanded of them.

THE SCOTCH MINING SHARE MARKET—WEEKLY REPORT AND LIST OF PRICES.

During the past week all the markets were further disorganised by large failures at Manchester and elsewhere, the rise in the value of money, and the disturbing attitude of the Russian forces in Turkey. As regards mining securities, buyers appear to have withdrawn their support altogether, and the depression in prices is only limited by the necessity or panic of the sellers. It is feared the worst of the crisis will not be passed for some time yet, but that it will be succeeded by a sounder and better state of business, as the failures will clear off such firms as have been overdoing every department of business, and trading at a loss. The intervening fortnightly settlement has been one of unusual anxiety. Particulars of the continuation business done will be found below. The new account is now in progress for settlement October 30, and has so far exhibited a tendency towards recovering strength.

In shares of coal and iron companies the weak position of many of them, and the difficulty anticipated in getting accommodation, are causing shares to be freely offered. On the week Nant-y-Glo and Blaina preference are reduced 3*l.* per share; Benhar, 1*l.* 2s. 6d.; Shotts, 1*l.*; Marbella, 15s.; Glasgow Port Washington, 10s.; ditto prepaid, 7s. 6d.; Bolckow, Vaughan, A, and Scottish Australian new, each 5s.; while Ebbw Vale are nominally better at 6 to 7. Richards and Co., unaltered. The Oakham Colliery has completed the reduction of its nominal capital from 200,000*l.* to 75,000*l.* Andrew Knowles and Sons are quoted at 5 dis. Bilbao, 20¾. Bolckow, Vaughan, A, 56¼ to 56¾; ditto, B, 35¾, ex div. Chapel House, 50s. to 60s. C. Cammell and Co., 8¼ dis. Chillington, 57s. 6d. to 65s. John Bagnall and Sons, 17s. 6d. John Brown and Co., 12½ dis. J. and G. Wells, 11¼ dis. Monkland preference, 60s. Muntz's Metal, 65s. prem. Nant-y Glo and Blaina preference, 18 to 20. New Sharlston preference, 55s. to 65s. Omoa and Cleland, 7s. 6d. Pelsall, 11¼ dis. Rhymney, 13 to 15. Sandwell, 16¼. Scottish Australian, 32s. 6d. to 37s. 6d. Sheepbridge, 27½ dis.; ditto new, 7¾. Staveley, A, 8 prem.; ditto, D, 12½. West Cumberland, 8⅞. West Mostyn preference, 20s. W. Cooke and Co., 37 dis. Wigan, 57 to 59. Workington Malleable, 12¼.

In shares of foreign copper concerns, Tharsis stand 7s. 6d. higher for the week, at 21¾, but were as high as 22¾. The effort recently made to stop the action by the shareholders of this company against the original directors and promoters has apparently been of no avail, as a summons has just been served upon each of them for the sum of 150,000*l.*, on the grounds that that the company was floated by means of false and fraudulent representations. The drawn bonds and coupons of the Panulcillo Company, due December 15, are payable on presentation under discount at the rate of 5 per cent. The directors of the West Prussian Company appear to take a favourable view of the foreign lead trade. They ascribe the unprecedently low price to temporary as distinguished from permanent effects. However, this makes no difference for the time being, as although they reduced the cost of production and increased the output their net profits were smaller. Cape shares are at 30 to 30½; New Quebrada, 35s.; Rio Tinto 5 per cent., 58¾; Yorke Peninsula, 3s. to 5s.; and ditto (pref.), 12s. 6d. to 17s. 6d.

Shares of home mines have been awfully flat, without exception. There is not the slightest prospect of improvement to lift the market out of the slough of despond into which it has fallen till an upward movement can be attained in metals. Tin, indeed, instead of rising is falling even to lower depths. While so bad an account has to be given of the shares the market for entire setts, such as silver lead mines or china-clay properties, is hardly less depressed. Tracts of unexplored ground of splendid promise are perfectly unmarketable. Again, looking at a productive mine, such as Great Laxey, we find shares are likely to fall, although they return the investor 9¼ per cent. at late prices. What is the reason of depression in such a company, which sold last half-year 40,595*l.* of metal, and after paying 20 per cent. dividend carries forward 4328*l.*, with a reserve fund of 6080*l.* intact. It must either be an utter hopelessness of any speedy recovery in metals or a belief that the accumulated losses or liabilities incurred in a time of depression will have to be wiped off if things do improve before any benefit reaches investors. Aberdaunant are at 6s. Bampfylde, 8s. Bodidris, 15s. Cambrian, 37s. 6d. Clementina, 20s. to 30s. Deep Level, 3 to 5. Devon Consols, 30s. Great Laxey, 15¾ to 15¾, ex div. Magpie, 5 to 9. Medlyn Moor, 10s. Paracombe, 12s. Pandora, 12s. Roman Gravels, 6¾. St. Patrick, 10s. South Condurrow, 10¼. West Chiverton, 65s.

In shares of gold and silver mines, Richmonds have ranged from 9¾ to 10, and are finally 2s. 6d. higher per share for the week. The advices from the mine have been favourable, and they are going to reconstruct furnaces of their own in preference to renting those of the Atlas, but it would appear this will cause some delay, and lessen the profits. In regard to Exchequer shares, there is a difference of opinion as to whether the directors will succeed in raising the capital. While it would be surprising if they did so as quickly as is indicated by the closing of the list of applications, there can be no doubt that the success would cause the shares to rise, especially as a meeting to declare a dividend would soon be called if the scheme is properly understood. The produce of the St. John del Rey for September is 30,500 ozts., and that of Don Pedro 1650 ozts. A partial claim on Blue Tent has yielded $10,600. An improving report is received from Almada and Tirito. The accounts of Chontales for August show a profit of 280*l.*, and Javali also a profit of 388*l.* Birdseye Creek are at 14s. Colorado United, 45s. Eberhardt, 72s. 6d. Emma, 2s. Exchequer, 5s. Flagstaff, 7s. 6d. to 10s. Frontino, 47s. 6d. I X L., 2s. 6d. to 3s. 6d. Javali, 8s. Port Phillip, 11s. St. John del Rey, 27s. South Auraro, 3s. 9d. Tecoma, 3s. 6d. United Mexican, 82s. 6d.

In shares of oil companies, Young's Paraffin were at one time lower at 13¾, but have since improved, and show an advance of 6s. 3d. for the week. Uphalls are 2s. 6d. lower. The only business at the meeting of Price's Patent Candle Company was the declaration of the dividend at 6 per cent. on the preference shares; a balance of 10,670*l.* is carried forward.

In shares of miscellaneous companies there have been very few alterations. The principal demand for investments is for Phospho Guano, which, at 9*l.* per 10*l.* share, will yield about 9 per cent. There is also Liverpool Rubber yielding 7½ per cent. at present prices, and Milner's Safe, 5¼. Hamer's Salt, offered. Birmingham and Midland Counties Vale de Travers are at ¼ to 1. Hopkins, Gilkes, and Co., 10¾ dis. There have been more dealings in Wagon Companies' shares. The meeting of the Birmingham Company was held yesterday, and that of the Gloucester Company will be on Oct. 24. The report in the latter case shows a disposable balance of 237*l.*, which is to be carried forward. The wagon rents have been less than at any former period. A committee has been appointed to enquire into all matters affecting the management and interests of the concern, and at the proper time they will be prepared to recommend a practicable scheme for carrying out the reconstruction of the company's capital. Starbuck shares would yield 7½ per cent. at last price they were sold at to the investor. Birmingham are at 15¾; Gloucester, 8¾; Metopolitan, 2¼ prem.; Midland, 15; North Central (2nd), 6¼ prem.; Railway Carriage, 5½; Union Rolling Stock preference 6 per cent., ¾ prem. Shares of chemical companies are in favour; prices are:—Langdale's 4½; Lawes', 8¾ to 9¼; Newcastle, 43s. 9d.; and Northern Agricultural, 11 to 11½.

Chemical Companies.—Undertakings of this class have of late been coming more into notice, as many of them, such as Lawes' and Phospho-Guano, are very profitable, while others, such as Langdale's and Native Guano, are gradually working into a similarly good condition. It may be pointed out, if the electric light is going to supersede gas to any extent for general purposes, that the alteration will be the cause of great prosperity to such of those companies as manufacture sulphuric acid, or the other chemicals required in connection with the invention. By-the-bye, it would prejudicially affect such collieries as have gas coal seams. It appears that there are no chemical manure works in West Cornwall, and a company is about to be formed to supply the want. At present all local materials, bone, &c., are sent out of the county to be manufactured, only to be returned in the manufactured state. Thousands of tons are thus annually returned to this district alone, and a work on the spot would save these double transit costs, besides the commission of 10 to 15 per cent. paid to agents for selling. The production is very large in West Cornwall, as two or three gardening or vegetable crops are raised from the same ground in the year, and thus it is calculated that perhaps four times the quantity of artificial manure (all imported) is used to the acre as compared with other places. A remarkably good sight has been secured for the proposed works; and, as it is a certainty that the capital employed will yield a good rate of interest, it may be classed as one of the safest and most promising investments of business enterprise.

On Cont'ngo-day the following were the rates of continuation current:—Contangos: 1s. on Benhar Coal; 1¼d. on Glasgow Caradon; 1½d. on Huntington; 1¾d. on Monkland; 9d. on Richmond; 3d. even on Young's Paraffin.—Backwardations: 6d., 9d., 7½d., 1s., on Tharsis; 9d. on Uphall Oil. On comparing the making-up prices fixed to-day with those of the previous settlement, the variations thus shown on the following shares are—Richmond, have advanced 10s. per share; also Omoa and Cleland, 6d. Glasgow Caradon and Monkland are unaltered. Tharsis have declined 1*l.* 7s. 6d.; Benhar and Uphall each 1*l.* 5s.; Young's Paraffin, 18s. 9d; Huntington, 11s.; Glasgow Port Washington, 7s. 6d.; Marbella, 5s.; and Oakbank Oil, 1s. 6d.

Canadian Copper and Sulphur Company (Limited).—The report to the annual meeting of the company, on the 29th instant, states that meeting all liabilities there remains the properties with the work and machinery, also over 5000*l.* of cash assets. The properties are worth 10,000*l.* at surface value, but the mineral value is problematical. In good times there can be no doubt it would be worth more or less. There is a small stock of fines at the Capleton works, but what is now being worked up is of inferior quality. With the present very low price of copper the directors consider to continue operations would entail a loss, so they cabled on the 1st instant to the manager in Canada to dismiss all the men at Capleton, and to put the works in order for a long stoppage as soon as the stocks were exhausted. At the same time they instructed him to continue the sinking of the trial-shaft at Acton, with discretion regarding further explorations with the Diamond drill: 1800 ft. have been bored at Acton without making any great find of copper, but one part the indications were sufficiently favourable to warrant the sinking of the small trial shaft above referred to. The directors think copper will be got here, but the formation is such as to make its discovery very much a matter of good fortune, and if an immediate discovery does not happen they recommend that the company should be put into liquidation.

Mining in Flint and Denbighshires.—Attention was drawn several years ago to the fine field for investment afforded by the developing of the mineral tracts of virgin land intervening between the proved lodes in the carboniferous limestone so celebrated in these counties for its metallic wealth. The successes which have attended the enterprise of those who have been bold enough to go into such properties is very gratifying, and there can be no doubt similar success will attend those who choose to develope the remaining properties of the same class. The resuscitation of abandoned mines has been the favourite speculation of promoters of public companies in these counties, but is much to be deprecated, excepting such as can be drained by means of adit levels, or unless the operations can be carried on in such a way as to make the cost of drainage bear but a small ratio to the cost of development. This might be attained by the simultaneous development of every lode in the property as far as the drainage extended, but it will be found the actual practice has been just the very reverse of this, and to this misapplication of capital can be traced most of the mining disasters. In regard to the virgin tracts above referred to, the Rhyd Alun has been repeatedly and favourably mentioned in this report. A small expenditure on it has been sufficient to discover the rich lode that is attracting so much attention now. Although the development of this grant is in its infancy, it will be observed a sale of 40 tons of lead was made the other day for 403*l.*, and the total cost was only 140*l.* Though this margin of profit is very large, in future even better results are looked for. Another grant with the identical conditions for success possessed by Rhyd Alun, and within a short distance of it, is shortly to be introduced. The grant is very extensive, and the royalty low. It is developed by an adit level, and success is expected by a continuation of the same into the bearing districts, which are less than 100 yards off upon the champion east and west lode, upon which it has already been driven. The cost of these operations will of course be very small. This property it may be said is just within an ace of success already, and offers greater advantages for investment than any in the kingdom.

Rhosesmor Mining Company (Limited).—The ninth meeting of this company is to be held on Oct. 31, when the directors' report will be submitted. The balance-sheet already issued includes excessive charges for bank interest and commission, also salaries, considering that mining operations are practically suspended. The captain's report for the year states that attention has been principally directed to keeping the engine shafts and levels above the water-level in order. All parts of the mine are in excellent condition, and the four engines in good working order. This mine is altogether dependent for success on the driving of the Halkyn Deep Level, which is progressing rapidly. Within 400 to 500 yards of the present forebreast some east and west, also north and south, lodes will, from practical inferences, be intersected, and each will be letting off water from the surrounding district, consequently the chances are that the mine will thereby be greatly relieved.

Profitable Mining.—At the meeting of the Sierra Buttes Mine the other day it would be noticed a dividend of 2s. per 2*l.* share was declared for the last half-year. This was earned in four months, but owing to the drought, &c., some extra charges had to be met in the last two months, and cut down the profits. On this account the balance carried forward after paying the dividend is 9367*l.*, as against 9514*l.* brought in. This mine has an agreemegt to amalgamate with the Plumas Eureka so soon as the latter shall have paid 5 per cent. quarterly for two years. This Plumas Eureka is undoubtedly a mine of great promise. Last half-year they paid 3s. per 2*l.* share. The earnings would have paid a larger dividend, but some extra expenses were paid out of them. The principal feature in connection with this mine is that the directors expect that the new mill will so much increase the earnings that they will be able to pay the quarterly dividends above referred to, commencing with the balance from Jan. 1 next.

Subjoined are this week's quotations, &c., of mining and metal shares quoted on the Scotch Stock Exchanges:—

Capital. Per share.	Paid up.	Dividends. Rate per cent. per annum. Previous.	Last.	Description of shares.	Last price.
				COAL, IRON, STEEL.	
£ 10	£8	£ 7	£ 7†	Arniston Coal (Limited)	7¼
10	10	4	4	Benhar Coal (Limited)	82s. 6d.
100	50	22s 6d‖	34s 6d‖	Bolckow, Vaughan, and Co. (Lim.) A.	56¾
10	10	10	10	Cairntable Gas Coal (Limited)	8¼
10	10	4s‖	April, 1876	Chillington Iron (Limited)	65s.
10	7	—	—	Clyde Coal (Limited)	7
23	20	10s‖	Dec., 1874	Ebbw Vale Steel, Iron, and Coal (Lim.)	7
10	6	nil	nil	Fife Coal (Limited)	70s.
10	10	nil	nil	Glasgow Port Washington Iron & Coal (L)	35s.
10	10	—	—	Ditto Prepaid	40s.
10	10	—	—	Lochore and Capledrae (Limited)	80s.
10	10	nil	3	Marbella Iron Ore (Limited)	40s.
10	10	nil	nil	Monkland Iron and Coal (Limited)	45s.
10	10	5	4	Ditto Guaranteed Preference	60s.
100	100	nil	nil	Nant-y-Glo & Blaina Ironworks pref. (L)	20
6	6	nil	nil	Omoa and Cleland Iron & Coal (L. & Red.)	7s. 6d.
1	1	15	15	Scottish Australian Mining (Limited)	37s. 6d.
1	10s.	15	15	Ditto New	10s.
Stock	100	nil	nil	Shotts Iron	90
				COPPER, SULPHUR, TIN.	
4	4	—	—	Canadian Copper and Sulphur (Lim.)	5s.
10	7	7s 6d‖	35s‖*	Cape Copper (Limited)	30
1	1	7½	2½	Glasgow Caradon Copper Mining (Lim.)	20s.
1	15s.	7½	2½	Ditto New	13s. 6d.
10	9¾	nil	nil	Huntington Copper and Sulphur (Lim.)	16s.
4	4	—	—	Panulcillo Copper (Limited)	20s.
10	10	6†	6†	Rio Tinto (Limited)	65s.
20	20	7	7	Ditto, 7 per cent. Mortgage Bonds	14/ 3s 9d
100	100	5	5	Do. 5 p.ct. Mor. Deb. (Sp.Con. 8ds.)	61
10	10	22½	20	Tharsis Copper and Sulphur (Limited)	21⅝
10	7	22½	20	Ditto New	15¾
1	1	—	—	Yorke Peninsula Mining (Limited)	5s.
1	1	—	—	Ditto, 15 per cent. Guaranteed Pref.	17s. 6d.
				GOLD, SILVER.	
1	1	—	—	Australian Mines Investment (Limited).	8s.
5	5	7s. 6d‖	7s. 6d‖	Richmond Mining (Limited)	9¾
				OIL.	
10	7	6	15	Dalmeny Oil (Limited)	8¾
1	1	—	25	Oakbank Oil (Limited)	40s.
1	5s.	—	25	Ditto	11s.
10	10	7½	2	Uphall Mineral Oil (Limited) "A"	6⅞
10	10	—	—	Ditto "B" Deferred	10
10	10	—	—	West Calder Oil (Limited)	15s.
10	8½	17½	17½	Young's Paraffin Light & Mineral Oil (L).	13¾
				MISCELLANEOUS.	
50	25	5	6	London and Glasgow Engineering & Iron Shipbuilding (Limited)	22½
7	7	15	10	Phospho Guano (Limited)	9½
10	10	6	6	Scottish Wagon (Limited)	10⅝
10	4	6	6	Ditto New	81s. 6d.

† Interim. ‖ Per share. * For six months of 1878.

Note.—The above lists of mines and auxiliary associations are as full as can be ascertained, Scotch companies only being inserted, or those in which Scotch investors are interested. In the event of any being omitted, and parties desiring a quotation for them and such information as can be ascertained from time to time to be inserted in these lists, they will be good enough to communicate the name of the company, with any other particulars as full as possible.

J. Grant Maclean, Stock and Share Broker.

Post Office Buildings, Stirling, October 17.

THE MINERAL RESOURCES OF THE TRANSVAAL—No. IV.

Thus far the commercial question has alone been considered in referring to the mineral resources of the Transvaal, but it must not be that the favourable opinions expressed have been made without regard to technical geological researches. The travels of Carl Mauch during the seven years to the end of 1872 resulted in the collection of a large amount of valuable information. Mauch speaks of the northern slope of the Witwaters Rand plateau as being formed of rocks belonging to the silurian and metamorphic periods. The Megalies Berg he found to consist of white quartzite, which changes between compact and granular texture. The strike of the principal strata is from east to west, with considerable dip towards the north. Mauch found no fossils, but metalliferous veins, such as copper pyrites and thick layers of magnetic iron ore.

In the hill ranges towards the east of the Rustenburg Flat he observed a porphyritic formation, and diorite intersected with white felspar and leek-green hornblende. From slight impressions of ferns on the surface of the sandstone layers near the mouth of the Zuikerboshrand river he fancies there is here a coal formation. The lower Silurian rocks may be followed as far to the west as the Marico district, but there the clayslates appear much thicker. Graphite and slate containing crystals of chiastolite are also well developed in some places. Above this grauwacke formation is a layer of bluish silicious limestone of vast extent and considerable thickness, but throughout horizontal, showing thinner and thicker strata of dark or smoky flint.

After describing the cave at the Wonderfontein, near the sources of the Mooi river, on the main road from Pretoria to Potchefstroom, Mauch continues that this limestone formation, which he must call Devonian, extends as far as the Higher Marico district, even as far as Lattaku, beyond the Harts river; some spurs are met with on the Middle Marico river, and at the junction of the Schoen Spruit with the Vaal. South-east of Potchefstroom there is a range of small hills consisting of a dark grey or black rock containing white zeolite, which might be called amygdaloid porphyry. Within this group is an old mine in clay-slate containing variegated copper ore, but nobody knows who have been the miners. In this neighbourhood greenstone is also noticed for the first time, extending far south-west along the Vaal, increasing gradually in thickness towards the diamondiferous region, but changing afterwards in texture, stratification, and accessory minerals. The district from Potchefstroom to the Tatin was examined by Hübner some ten years since, but appears to be comparatively uninteresting.

The geological structure can be defined in a few words. Round a granite core, the periphery of which appears to be a many-limbed curve, lies a mantle of metamorphic rocks, which have been frequently fractured and intersected by greenstone; older sedimentary formations appear in one place in the south, and again under 20° south latitude. The granite is of mineralogical interest only in places, where it forms a scarce variety of tile red felsite (at the Limpopo), everywhere else its shows its normal composition—flesh-coloured orthoclase, colourless quartz, and black mica, nowhere distinguished by accessory minerals (with the exception of red copper crystals at Lee's farm on the Mangwe) or by metallic veins.

Coming from Pretoria, after passing the deserted village of Potgieters Rust, or Makapans Poort, we enter the region of an immense system of metamorphic slate. The dip and strike change a good deal, and it cannot be expected otherwise in contorted and flexured strata; but on the whole a strike from east to west can be observed. Among a series of formations may be mentioned talcose slate, chlorite slate, &c., rocks similar to sandstone, and a very characteristic rock formation of great extent—the so-called calico-rock, formed by alternate layers of quartz and iron ore. The separate layers are mostly very thin, but at Yserberg (Ironhill), the top of which principally consists of this formation, the iron ores increase considerably in some parts, and are worked by the natives. They consist principally of hydrate of iron and lepidokrit, which minerals have originated very likely from magnetic iron. The basis of the system of metamorphic slates is formed by granite, which rises in several small hills on the road from Eersteling to Zebedelis Kraal. This older granite must not be mistaken for those formations which sometimes adopt a structure similar to granite, and which belong to the series of metamorphic rocks. In the south-west follows hard silicious limestone, rich in layers and nests of quartz varieties. The limestone overlays the sandstone, and is similar to that found on the Kaap in Griqualand West. In the south of the Transvaal formations are also found which agree so exactly with this limestone that one can hardly doubt that it is the same formation. Until now only such quartz reefs have proved auriferous as appear in the metamorphic slates; the numerous reefs in the granite seem to contain no gold.

A very interesting spot is to be found in the neighbourhood of Eersteling. Here an auriferous reef—Pigg's reef—runs north and south, and to the south suddenly disappears, the slates then striking east to west. The quartz is very changeable in its outward appearance, and even in one and the same reef its physical properties are not always the same. The appearance of gold is also different in the places where it is found. In Button's Reef, near Eersteling, places containing gold are observable with the naked eye. It has since been ascertained to yield 4 to 4½ ozs. of gold per ton. Besides the gold, iron pyrites, copper pyrites, malachite, silver glance, or richly argentiferous galena, and iron glance have been found in the quartz, but only in small quantities. Alluvial gold has also been found in the neighbourhood of Eersteling and Marabas Stad to a small extent, but it is considered that alluvial gold could never be found in this locality in payable quantities.

The account of Dr. Emil Holub's trip from the Diamond fields *via* Christiana, Marico, and Shoshong, to the Zambezi gives only a rough sketch of the geological features of the region traversed by him. Concerning the so-called "ruins of Mosogra" between Christiana and Bloemhof, which caused some sensation at the time of their discovery, Holub agrees with Cohen and Dunn, who visited the place before him, that the "ornaments found at the saltpan, supposed to be the remnants of old buildings, are not formed by human hand, but by some strange freak of nature." He mentions the discovery of a copper mine at Malmani Spruit; rich iron-slate he found close to the sources of the Matebe, one mile to the west of Moilo, while as one of the most productive places in ores he names a certain farm on the sources of the Notuani. He says further that his explorations in the district of Marico have convinced him that this must be the richest district of the Transvaal, not only in metals but also in regard to the fertility of the soil; the whole region enjoys a superabundance of springs and spruits, promising a better future to this part of the country than all the auriferous wealth of the other districts. Dr. Holub was prevented from exploring the gold mine which he knew to exist in the Dwarsberg range, but he saw quartz gold, the same as is found in Tati, in the hands of a boer living in that locality. That the further exploration of the Transvaal will prove it to be very rich in minerals can scarcely be doubted, but until increased capital and improved means of communication, in the form of railways, be introduced its resources cannot be properly developed.

SUCCESSFUL FINANCING—THE ISABELLE AND EXCHEQUER GOLD AND SILVER MINING COMPANIES.

The following appeared in "Investments" of Wednesday:—

The Isabelle Company—Finance: Tunnel: Mining—100 per cent. Cash Bonus.—"Onward, and still onward!"—the motto of the South-Eastern Railway—seems the fair exponent of the policy about to be carried out by the Isabelle Company. While we are writing the tunnel is about to be commenced, a cablegram to that effect having been sent from London to the resident director. We are not among those who like to prognosticate early brilliant results from any mine; our experience tells us that patience has to be exercised by shareholders in most mining companies. But in the Isabelle Company there is something more behind the scenes than has yet come to light; and we are inclined to think that the managing director's visit to America in 1872 may be explained by his present connection with the Isabelle Company. We have heard it mentioned that large returns are likely to be realised long before the tunnel shall have been driven up to the first of the group of gold and silver ledges; in fact, if rumoured information which reaches us be correct, the first two months' workings may bring results hitherto unheard of in the mining world. So much for the mining section of the Isabelle Company.

But we must again draw attention to this extraordinary novel enterprise, which, while opening out its own mines at other people's expense, has in hand from its allies such an area that large contributions must be paid by other associations to enable them to develope rapidly their respective properties. When to these considerations we add the fact that the Isabelle Company has itself large developments in hand, which must bring considerable sums into the shareholders' pockets, we think we may congratulate those who have been fortunate enough to secure allotments of shares. We must express surprise at the great results already obtained, and more so at the secrecy with which all these vast negociations have been carried on. Not a word was known until the prospectus had been fairly launched.

Exchequer Gold and Silver Mines.—The popularity and appreciation of this scheme increases as it becomes understood. Hard no doubt it may be that the Exchequer Company should so have its precincts invaded, but as the former shareholders did not, when appealed to, come forward with the necessary capital to complete the successful development of the mines, they must when others do so necessarily submit to the "powers that be." The scheme has met with remarkable approval, and by those who have given it substantial pecuniary support, ensuring its success. It is not surprising that at first glance there was misconception, as it has taken 25 years to bring the scheme to its present condition. We may add upon what we believe to be authentic information that, irrespective of the subscriptions in this country, large amounts have been applied for from different parts of the Continent.

New Metal and Ore Furnace.—The invention of Messrs. Owens and McNair, of Allegheny, Pennsylvania, consists in placing a shelf or hearth at back and above the fire-box for the reception of the fuel when it is first fed into the furnace, and which hearth is heated from underneath by the waste products of combustion, so as to decompose the coal and generate gas and carbonic oxide, whereby the whole of the coal is used as a fuel, and a greater amount of heat obtained from a smaller or the same quantity of fuel, and a great saving effected. When the coal contains but a small portion of gas, and it is desired to convert a larger portion of it into carbonic oxide before being fed upon the grate, suitable air holes are made through the front or side of the walls above the hearth, so as to admit any quantity of air that may be desired. As the fuel is consumed, and the carbonic oxide formed rises up over the bridge, it receives another equivalent of air, and is then converted into flame in a converting chamber, where the perfect combustion takes place. One great advantage in thus decomposing the fuel is, that all the sulpur in the coal is driven off in a gaseous space, and this sulphurous acid mingling with the air over the bridge is at once driven off, before it can attack the metal or ore in the chamber. By thus protecting the metal from the action of the sulphur, a finer and better grade of iron, &c., is produced in every way, both in tensile strength and fibre, and for making steel and fine sheet iron. The hearth of the chamber may be made to conform to the use to which the chamber is applied. The waste products of combustion pass down the flue forward through two flues, one on each side of the central air flue, up under the hearth, and then up the stack. The air passes through an inlet forward through the flue towards the front of the furnace, across into a second flue back towards the rear end, down through another flue and towards the front end of the furnace through a central flue. From the front end of the flue the heated air rises through the flues up into the chamber, from which chamber it escapes through the small perforations over the top of the grate bars and reducing chamber. It is intended that after the air once passes through the inlet it shall move constantly forward through one flue after another until it reaches the chamber, which chamber and flues are all heated to such a degree as to raise the air to a very high temperature. By suitable arrangement of the flues, the air is constantly increased in temperature until it escapes in the flue, instead of being allowed to cool in places, as in many other furnaces. The perforations through which the air escapes from the chamber are to be made quite small, so as to break the air up into minute particles, and thus prevent the air from descending upon the fire in volumes. When the air is thus broken up, it

mingles thoroughly and completely with the products of combustion, and this causes a more perfect combustion to take place than would otherwise occur. In working a furnace with the above improvements when an oxidising or reducing flame is needed, the air is allowed to pass through the flues to mingle with the products of combustion, and thereby cause an excess of oxygen in the reducing chamber. When it is desired to use a deoxidising flame, all air is shut off from the flues, and then there will be an excess of carbon in the products of combustion in the reducing chamber, and the iron will be carbonised thereby.

THE WEEK.

SATURDAY, OCT. 12.—Turkish Fives are now but 10⅜, the 1858 Loan 18, and that of 1873, 11. To-day Egyptian Preference fell to 73¼, the Unified being 55⅛ to 55⅜. In gas shares business was more quiet than on any other day during the week, Bombay and Oriental are said to be worth buying. Railways left off lower in every instance, Dover, A, being 123; Brighton, A, 141; Metropolitan, 110⅛; District, 58; and Great Eastern, 50⅛. Mining shares had a tendency to dulness, Colorada being offered at 2⅛; Kapanga, 1¼; and Frontino, 2¼.

MONDAY.—The Bank of England raised the rate to 6 per cent. The directors had a meeting on Saturday, but nothing then was done. The change, accordingly, came somewhat as a surprise, and exercised a depressing effect on the markets. In Dover, A, and Brighton A, where a large weak "bull" account is open, there was a fall of nearly 2 per cent. Heavy contagoes were also charged, so that the real fall was even greater. Mining shares were also offered somewhat. Kapanga fell to 20s., Eberhardt to 3¼, Exchequer to 6s., and Sierra Buttes to 1⅛.

TUESDAY.—Compared with last account many securities show a serious fall, and the differences are quite large enough to cause some failures on settling day. In railways, Caledonian have fallen from 107 to 100, North British from 94½ to 87½, North-Eastern from 140½ to 133¾, Midland from 121¾ to 117¼, and Sheffield 1873 have lost way to the extent of 3/. ; Turkish Fives, 2/. ; the 1869 issue, 3⅜; and the A, B, and C, 4/.

WEDNESDAY.—There were five failures to-day, but none of very great importance, except to the parties themselves. Some severe fluctuations took place in Unified at prices from 53 to 56. Railways left off firmer. In mining shares Colorado fell to 2, and Great Laxey to 16⅛. Kapanga was dealt in at ⅞, and Richmond at 9⅝. A fall of 4½ was reported in National Provincial Bank shares, but no business done was recorded. General Credit rose 5s.

THURSDAY.—The report presented to the Odessa Waterworks Company is not any more encouraging than its predecessors. The employment of nearly 1,000,000/. capital still fails to produce any profit. The loss for the half-year is about 2000/. The proceedings of the Odessa municipality seem to be as arbitrary as ever. The shares are now somewhat difficult to deal in; the A shares are nominally 3 to 4 (20/.) paid. National Safe, 3 to 3¼; there is a loss of over 4000/. on the year's working. United Discount, 4¾ to 5¼; London Steamboat, 5½ to 6; Brighton Aquarium, 7½ to 8½; Mercantile Bank of River Plate, 2¼.

FRIDAY (*Opening*).—The chief feature this morning is the bidding for Turkish Fives, which are up to 10⅞, and very firm. Ottoman Bank shares have improved in sympathy to 8⅞. Egyptian Unified, 54⅞ to 55½; preference, 68⅞ to 69⅛. Buyers offer 10/. for Richmond. Kapanga are a little better (⅞ to 1⅛); many consider these shares cheap—the last return was 88 ozs. of gold. Santa Barbara shares are 30s. to 35s. (10s. paid); a further rise is expected here in several quarters—the estimated profit for August is 711/. Tin is reported as firmer, the standards being put up 2/. Carn Brea, Dolcoath, Wheal Grenville, and South Condurrow are all, however, still pretty well neglected, and quotations nominal. General Credit, 5½ to 6. Credit, A, ⅞ to 1; ditto. B, ⅛ to ¼. London Steamboat, 5¼ to 5¾.——*Two o'clock.*—Railways are offered. Brighton, A, are only 139¼; Dover, A, 122¾; Great Western, 94½; and North British, 86⅛. Turks have receded to 10¾; at Paris, however, the price is close upon 11/., and the market there is reported as firm. United Mexican, 3⅞ to 4⅛. Richmond, 9⅞ to 10⅛. Colorado, 2¼. Javali, 7s. to 9s. Don Pedro, 11s. to 13s. Pandora, ⅜ to ⅞.——*Four o'clock.*—A sudden recovery set in an hour ago, and nearly all railways and foreign bonds show an important rise on the day. Unified are over 56, after being 54½. Turks have risen to 11⅛, the 1873 loan being 12¼ to 12⅜. Caledonian are up to 101¾, 102; Brighton to 140¼; and Dover, A, to 122¾, 103. Chapel House, 2¾ to 3. Bilsom and Crump, 2¼ to 3½. Newport Abercarn, 4 to 4⅛. Port Phillip, 10s. to 12s. 6d. Frontino, 2⅛ to 2⅜. Eberhardt, 3¾ to 3⅞.

FERDINAND R. KIRK.

THE VAN MINES—MONTHLY REPORT.

Oct. 15.—At the 120, west of shaft, we have crossed north 13 ft. into the lode, which is intermixed with spots of lead and blende. The 105 west is not looking so well; worth at present 4 tons of lead ore per cubic fathom. The stope upon the branch in the back of the 105 west is worth 28 cwts. of lead ore per cubic fm. The 105 east is driving in a strong lode intermixed with lead and blende, but not sufficient to value. The stripping of the lode to full width in the end of the 90 west is worth for lead ore 6 tons per cubic fathom. The winze sinking below the 90 west is down 7 fms.; the lode here is worth 5 tons of lead ore per cubic fathom. The stripping of the lode to full width in the side of the 90, at 78 and 85 fms. west of shaft, is worth 30 cwts. of lead ore per cubic fathom. The stopes in the back of the 90, east and west of shaft, nine in number, are worth 2 tons 12 cwts. of lead ore per cubic fathom; average width 23 feet. The rise in the back of the 90 east at present end is up 3 fathoms. The rise in the back of the 75 west is up 5½ fathoms. We have about 4 fms. more to rise to communicate with the winze; when this is done we shall resume the driving of the level. The stopes in the back of the 75, east and west of shaft, 11 in number, are worth on the average 1 ton of lead ore per cubic fathom; mean width 15 ft. 6 in. The winze sinking below the 75, east of shaft (to meet the rise from the 90), is down 2 fms.; as soon as communication is effected we shall resume the driving of the level east. The stopes in the back of the 60, east and west of shaft, are worth on the average 1 ton of lead ore per cubic fathom; mean width 12 feet. The two stopes in back of the 30, east of shaft, are worth 1 ton of lead ore per cubic fathom; average width 12 feet. The permanent levels are pushed forward as usual.—Surface: The whole of the machinery is in good working order. Our sale takes place on Thursday next, upon 500 tons of lead ore and 150 tons of blende.—WM. WILLIAMS.

FOREIGN MINES.

ST. JOHN DEL REY.—Telegram from Morro Velho, dated Rio de Janeiro, Oct. 17: Produce eight days, first division of October, 9500 oits.=3681/.; yield, 6·6 oits. per ton=8·2 oits. per ton by old measurement. Rains have set in.

BLUE TENT.—D. T. Hughes, Sept. 21: We have been favoured with some water the past week from the Fall Creek Lakes Water Company (Limited), and have a very good stream coming in now as I write, and likely to continue long enough to give us a short run. Everything is working favourable at the mines, and have nothing new to report.

UNITED MEXICAN.—Advices from Mr. Edward Hay, dated Guanaxuato, August 24: Mine of San Cayetano de la Ovejera: The wall of the Contra natural vein having disappeared the lode we have been driving on in Los Angeles took a more westerly direction, and some days later the underlay changed completely, and the vein became "contra natural." The men were put on day work, as in the investigation to be made of the lode the direction to be followed could only be decided on as the work advanced; we have up to to day driven 3 metres along the upper wall, which is getting more vertical, and this makes us believe that the lode will take its former inclination, and become "natural" as it was before. To the alto strips of quartz have appeared that contain some vein stuff assaying 4 ozs. of silver per monton. This change in the nature of the rock took place yesterday. The width of the lode is 1·50 metres, and hardly any water comes away from the end, though in the old workings the water has increased so much that we have to work the horse whim night and day to keep it down in the shaft. This would seem to prove that the lode we are working on in the winze is a lode to the alto of the one in Los Angeles. On August 20 we communicated the different levels with that of La Purisima, so that our roadway is completed from the mouth of the mine down to the winzes, but there is still a large quantity of mud, attle, and damaged timber to be taken out from the passage we have opened; some ore has been thrown down in making this communication. In order to be able to clear the first or south winze while we continued to sink in the Pozo de Guia we put a second branch of tubes down the first pozo, and find that the ventilator extracts easily the foul air from both winzes at the same time. At 8 metres above the present depth in the Pozo de Guia we have opened a frente to the north-west on the lode, but after having driven 1¼ metre we had to traverse a third winze, the mouth of which had not yet been found in the level of Purisima. It was filled with rubbish, but on the other side we continued to drive on the lode in ore, though not of such a rich class as the first we discovered. The lode is getting broader; the alto with ordinary ore 75 centimetres wide, the middle about 1½ metre (barren), and the bajo with here and there patches of ore. The whole length of this labour is 5·20 metres. In the first pozo there is about two fingers breadth of good ore, and in the second, where the lode had got narrower in depth, it has again widened, and it is now 1 metre broad, with stones of ordinary azogue (silver ore) at small distances from each other. In the northwest end of the old workings we are no longer sinking through the rubbish, but cleaning towards the spot from where air has been coming for some time past.

FONTGIBAUD.—Oct. 14: Roure: The lode in the 175 metre level has been deranged by a slide; both ends are now unproductive. The 150 continues in a strong and regular lode, but is yielding no ore to value. The winze below this level yields a little saving work. Our 100 cross-cut east continues in hard ground; we are getting near the lode, which we hope to intersect in about two months' driving. The 80 south on Virginie's lode yields a little ore. The same level north, just over the 100 cross cut, is unproductive. The 60 north yields ⅓ ton of ore per current metre, and the lode where it is being undercut to the south of Brugeres winze at this level continues to produce well, yielding 1½ ton per current metre. The 40 north yields ½ ton of ore per current metre. The 20 north on the eastern part of the lode is unproductive. The same level in the opposite direction yields ¼ ton per current metre.

La Brouse: The 140 metre level south is in a soft, speedy rock, yielding a little ore and blende, but not enough to value. The undercutting of the lode behind the 120 metre level yields 1¼ ton of ore per current metre. The 100 metre level south is temporarily suspended to rise for ventilation; the lode is unproductive. In the 80 metre level south we have set to cross-cut a little to the east, to prove the width of the lode; the part carried in the level is composed chiefly of a reddish spar, and is not worth following. The new shaft is down to the 120, and to be sunk.

Pranal: The 90 north is unproductive. The same level south, on both parts of the lode, opens a productive ground, worth ½ ton of ore per current metre. The 50 north yields stones of ore at the foot of the level. The same level south is unproductive. The 50 south yields ¼ ton of ore per metre. The winze in the 50 north, near the end yields ¾ ton of ore per current metre.—Villelongue: In the adit level we are now cutting into the main part of the lode; it presents a strong appearance, being composed as far as seen of quartz, mundic, blende, and a little barytes and spots of lead ore, but not rich in silver. At Lavergne there is a strong lode, rich in silver, and composed almost entirely of quartz, spotted with lead ore.

[For remainder of Foreign Mines, see to-day's Supplement.]

The following report was received too late for insertion in its proper place:—

WHEAL GRENVILLE.—T. Hodge, Oct. 17: Since my last we have fixed the standing lift at Goold's shaft, and resumed sinking yesterday. The 140 east end is worth 9/. per fm. The rise in back of said level is worth 8/. per fm. The 130 east end is worth 8/. per fm. The winze sinking below said level is worth 8/. per fathom. The rise in back of the 130 is worth 10/. per fm. The 140, east of the western shaft, is worth 7/. per fm. The stopes, on the whole, are turning out fair quantities of tin.

Original Correspondence.

SANTA BARBARA MINING COMPANY.

SIR,—We are glad to observe in this, the August, month's report a profit of 711/. 18s. 8d., being a gradual rise progressive ever since the beginning of the year, in February the profit realised being only 251/. 13s. 4d., which was a falling off from former returns. Prior to the disaster to the water-courses in the beginning of 1877, when in February and March instead of a profit a loss was sustained, added to which the yield of gold per ton fell off, and the costs increased. Now, however, the scale is turned, for by this August agent's report the sinking of the shaft and the lower stopes prove the lode in depth to increase both in size and yield; in the latter closely approaching the highest yield of Oct., 1875, and Nov. 1876, and above all the others, therefore, it may most reasonably be concluded that this now lesser gold mine will very soon assume greater proportions, and instead of 711/. 18s. 5d. we may fairly assume that before the end of the year we shall see the figures raised to 1000/. at least, with every promise from the increasing expansion and richness of the lode of doubling that amount in 1879. SILEX.

[For remainder of Original Correspondence see this day's Supplement.]

ELECTRICITY FOR PREVENTING BOILER INCRUSTATION.

With a view to protect electrically and in an efficient and economic manner the iron and steel material of steam-boilers from the corrosive action of salt, or acid, or other agent in water, Messrs. HARROP and HOWDEN, of Sheffield and Glasgow, propose an arrangement, according to which the zinc is immersed in the water of the boiler in any convenient position, and to insure that the intended electrical protective action shall be exerted with as little expenditure as possible of the zinc; it is put in continuous metallic conductive connection with the plates or other parts of the boiler that are liable to corrosion in one or other of the modes hereinafter described, whilst means are also employed to properly connect the plates and other parts of the boiler amongst themselves, in order that the action may be adequately distributed throughout, and the application of numerous pieces of zinc be rendered unnecessary. The zinc is by preference used in the form of a sheet or sheets or other piece or pieces presenting considerable surface, and is placed vertically, so that deposits may be less liable to rest on it and mask its action. The zinc is connected to the iron or steel of the boiler by one or more copper wires, and each copper wire is united to the zinc in a manner securing a large and perfect contract surface between the two.

When melting the copper and zinc care is taken that the contact surfaces are as clean as possible, and that a perfect metallic junction is made. One mode of making a suitable union is to cast a block of zinc upon a part of the copper wire, and subsequently roll the block down to a suitable thickness. A second mode consists in giving a zigzag or serpentine form to the end of the wire, and soldering it down upon the zinc. A third mode consists in lacing the copper wire through holes made through the zinc, with or without the addition of solder. A fourth mode consists in making holes through or partly through the zinc, and indenting the copper wire into such holes, solder being added if necessary. A fifth mode consists in soldering or otherwise fixing two or more short wires to the zinc, and uniting the ends of these to a single wire. The copper wire may be round or ribbon-shaped, or of other suitable form. The end of each copper wire from the zinc is put in perfect metallic connection with the iron or steel to be protected by firmly inserting the wire into a hole bored into the plate or piece, the end of the copper wire as well as the interior of the hole being carefully made clean and bright, and a proper fit, so that the hole may be completely filled by the wire, and water effectually excluded. The hole and wire may be smooth, or they may be screwed. The wire between the iron or steel and the zinc may be made so as to be easily separated at any point, being connected by screw couplings or otherwise, so that the part attached to the zinc can be detached for the purpose of renewing the zinc.

To insure a proper distribution of the electric protective action, care is taken to have the several plates and other iron or steel parts requiring protection in perfect metallic conductive connection with each other. For this purpose small holes are bored through the plates where they overlap or are in contact, and these holes being kept clean and bright, clean bright bits of copper or iron are rivetted or otherwise tightly fixed in them in a manner to exclude water. Each plate is to be connected in this way at one or more points with every plate in contact with it, and which requires protection. If the boiler has tubes the conductive connection of each tube with the tube plates is insured by boring a small hole at one end or at each end through the tube, and some depth into the tube plate, and driving or screwing a copper pin into each such hole, care being taken that the contact surfaces are clean and bright, and that the pin is fixed with sufficient tightness to prevent the entrance of anything that might impair the metallic contact.

COLORADO UNITED.—The Oneida on Sherman Mountain, leased by Messrs. Lemen, Miller, and Shay, continues to turn out ore of wonderfully high grade, a run brought down last Monday yielding 1860 ozs. for first-class, 574 for second, and 136 ozs. for a quantity of concentrating mineral, consisting mainly of rock. Since this party of lessees commenced work their second-class ore has never carried less than 500 ozs. of silver to the ton.—[The above paragraph is taken from the Georgetown Miner, a newspaper published in Georgetown, Colorado, three and a half miles from the company's property. The Oneida is the property of the Colorado United Mining Company, and is leased up to the end of December.]

PANT-Y-MWYN.—As the development of this mine progresses the indications for a great and lasting mine in depth become more marked. The present important discoveries have been considerably enhanced by the intersection this week of the lode at Modlyn shaft, at a distance of nearly 130 yards below surface, and about the eighth of a mile from Griffiths' shaft, from where they are making large monthly returns and handsome profits. They have for some time been expecting to intersect the lode at this point, which is a continuation of the rich courses of ore they are working on at Griffiths' shaft. They contemplate erecting an engine at this shaft should it be required, but at present the machinery is adequate for all purposes.

THE STOCK EXCHANGE.—The evidence taken before the Royal Commission on the London Stock Exchange has just been issued. Fifty three witntsses were examined, most of whom were officials, dealers, or brokers in the Stock Exchange. The evidence extends over upwards of 350 folio pages, and there are besides a number of appendices, consisting of documents and statements handed in by the various witnesses. One of these is a paper furnished by Mr. Perowne, showing the financial position of the Stock Exchange as a joint-stock undertaking. On March 29 last year the managers recommended a dividdnd for the past year of 10 guineas per share, equal to 105/. on each old share. The capital then amounted to 206,000/., and the amount of net revenue absorbed by the dividend was 42,000/. There was a debit balance on capital account of 26,033/., which it was proposed to meet by a call of 2/. 10s. per share, or 25/. on each outstanding old share. The report of the managers stated that the number of members for the past year was 2009 and of clerks 1536, as against 1979 members and 1312 clerks for the previous year. The total number of proprietors was 502. From a paper handed in by Mr. Underhill it appears that the number of defaulters on the Stock Exchange from 1867 to 1877 was 265, of whom 161 were brokers and 104 jobbers. Of this number 105 were re-admitted, four of whom paid their debts in full; 149 did not apply for re-admision; 10 applied but were rejected, and one application was postponed. A table handed in by Mr. Medley, a dealer on the Stock Exchange, gives the total of loans to foreign States taken in London as 614,228,300/. Of these loans all obligations were fulfilled on 81,825,500/.; on 175,160,100/. there was a partial default; and on 157,239,700/. a total default. The loans in default were thus 54·11 per cent. of the whole amount. The States upon whose loans there was a total default were Bolivia, the Confederate States, Costa Rica, Ecuador, Georgia, Greece, Guatemala, Honduras, Liberia, Louisiana, Mexico, Paraguay, Peru, Poyais, San Domingo, Turkey, Uruguay, and Venezuela.

A special resolution of the Oakham Collieries Company (Limited) reducing its nominal capital from 200,000/. to 75,000/. has been confirmed by the Chancery Division of the High Court of Justice.

MESSRS. PIXLEY and ABELL.—GOLD continues to flow in from the Continent, chiefly from Paris, and although a few shipments have been made to the United States, the bulk of the arrivals has been sent to the Bank, no less than 621,000/. having been purchased by that establishment since our last week's circular. In addition to the amount received from France the Pekin has brought 100,210/. from India, and the Mozelle 11,000/. from the West Indies.——SILVER.—Prices of bars have shown a continued decline since our last, and the quotations given below of 49½d. exhibit a fall of 1¾d. per oz. in the week. The market during that time has been dull and unsettled; the exchanges from India have gradually fallen. The rate for the Council Drafts yesterday was much lower (1s. 7d. per rupee), and even at this rate only about half the amount was allotted, and there are no orders for the East; under these circumstances it is not surprising that silver which at the end of last week was worth 51d. has to-day been sold at 49½d. We have received during the week 44,000/. from the Pacific, about 12,000/. from the West Indies, and about 7000/. from New York. A portion of the first arrival was sold at 50⅛d, but only 49½d. could be obtained for the remainder. The steamer sailing to-day takes no silver to the East.

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LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Oct. 1	Vaughan	20	£11 0 0	Panther Lead Co.
	Goginan	33	12 15 0	ditto
3	Great Dyliffe	40	10 0 0	ditto
4	Llanrwst	50	8 15 0	Adam Eyton.
	Llanfyrnach	43	9 5 0	ditto
	ditto	9	5 9 0	Nevill, Druce, and Co.
15	Foxdale	105	9 13 0	ditto
16	Wye Valley	40	9 8 6	Walker, Parker, & Co.
17	Van	250	10 4 6	ditto
	ditto	25	10 12 6	ditto
	ditto	50	10 7 0	Weston, Son, and Co.
	ditto	50	10 5 0	ditto
	ditto	100	10 5 0	Mining Co. of Ireland.
	ditto	25	10 12 6	ditto

BLENDE.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Oct. 17	Van	75	£ 2 17 6	Vivian and Sons.
	ditto	75	2 17 6	Richardson and Co.

COPPER ORES.

Sampled Oct. 2, and sold at the Royal Hotel, Truro, Oct. 17.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Devon Great Consols	91	£1 8 6	Marke Valley	72	£2 15 6
ditto	82	1 7 6	ditto	60	4 7 6
ditto	76	1 3 6	ditto	59	4 16 6
ditto	75	1 5 6	ditto	51	3 5 6
ditto	73	1 2 6	ditto	36	4 5 6
ditto	61	3 18 6	ditto	32	1 6 0
ditto	54	1 6 0	Gawton	70	1 11 0
ditto	53	3 17 0	ditto	67	1 11 6
ditto	47	3 18 0	ditto	56	1 11 6
ditto	40	1 3 6	ditto	14	3 19 0
South Caradon	80	2 14 6	Glasgow Caradon	70	4 16 6
ditto	70	4 8 6	ditto	66	4 8 6
ditto	60	3 0 6	ditto	64	3 17 6
ditto	51	8 19 6	Wheal Crebor	70	2 8 6
ditto	49	8 17 6	ditto	48	2 15 0
ditto	47	3 1 0	Hingston Down	93	2 7 0
ditto	43	3 1 0	Bedford United	60	3 18 6
ditto	40	11 16 6			

TOTAL PRODUCE.

Devon Great Con.	652	£1253 9 0	Glasgow Caradon	200	£ 877 16 0
South Caradon	440	2349 7 0	Wheal Crebor	118	301 15 0
Marke Valley	310	1109 10 0	Hingston Down	93	218 11 0
Gawton	297	357 10 6	Bedford United	60	236 10 0

Average standard	£ 86 19 0	Average produce	6¾
Average price per ton		£3 4 6	
Quantity of ore	2080	Quantity of fine copper 142 tons 17 cwts.	
Amount of money		£6703 8 6	

LAST SALE.—Average standard £85 15 0 | Average produce 7⅛
Standard of corresponding sale last month, £ 90 1 0—Produce, 6¾

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Vivian and Sons	504½	£2086 11 0
Grenfell and Sons	116	229 11 0
Nevill, Druce, and Co.	383½	960 11 6
Williams, Foster, and Co.	782½	2845 6 6
Mason and Elkington	243½	525 2 6
Charles Lambert and Co.	14	55 6 0
Total	2080	£6703 8 6

NO SALE on Thursday next, Oct. 24.

Copper ores for sale at Tabb's Hotel, Redruth, on Thursday week—Mines and parcels.—Mellanear 569—East Pool 276—West Tolgus 250—West Seton 114—Botallack 90—West Basset 42—New Cook's Kitchen 37.—Total, 1378 tons.

WATSON BROTHERS' MINING CIRCULAR.

WATSON BROTHERS,
MINEOWNERS, STOCK AND SHARE DEALERS, &c.
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

Ten years ago the weekly information which had previously been published for a great number of years in WATSON BROTHERS' Mining Circular was transferred to the columns of the *Mining Journal*, with the following announcement; which is now reproduced in consequence of the numerous letters and enquiries handed to them of late in reply to one which appeared in the Journal on the Clementina Mine.

In the year 1843, when mining was almost unknown to the general public attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with Statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring the success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and sharedealing than there is at present; and from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to offer, thus publicly, their best services and advice to all connected with mines and mining.

Messrs. WATSON BROTHERS are daily asked their opinion of particular mines, as well as to *recommend* mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

The great extension of mining business, the difficulty so often complained of by country shareholders in getting accurate and disinterested information as to the state of Cornish and Foreign Mines, and of the financial and real position of mining companies generally, have induced Messrs. WATSON BROTHERS to make their Circular now published in the *Mining Journal* more extensively known, and to state—

That they issue daily to clients and others who apply for it a Price List (as supplied to most of the London and country papers), giving the closing prices of Mining Shares up to Four o'clock.

They also buy and sell shares for immediate cash or for the usual fornightly settlement in all Mines dealt in on the Mining and Stock Exchanges, at the close market prices of the day, free of all charges for commission. They deal also, on the same terms, in the Public Funds, Railways, Telegraphs, and all other Securities dealt in upon the Stock Exchange.

Having agents in all the mining districts, they are constantly getting mines inspected for their own guidance, and will also obtain special reports of any particular mine for their clients, for the inspecting agent's fee of £2 2s.

PANT-Y-MWYN.—We wish to assure the many correspondents of the *Mining Journal* of last week that we have not been misled by mere interested parties, nor would they consider that we have erred for "want of information" if they knew *all* that we possessed. We had not intended to say more, but we cannot allow some of the letters, anonymous as they are, to pass without comment. A "Shareholder" who attended the meeting, and *thinks* he knows who our informants are, must at any rate know that many subjects were brought before that meeting which have not been made public, but which it was only fair that intending investors should be made acquainted with. The agent, Captain Hughes, says that the solicitor to the company informed the shareholders at the meeting that "the leases did not tie them to the strength of the engine if one was erected sufficient to cope *with present requirements*." Surely the agent has misunderstood the solicitors. Was it not explained and understood at the meeting that the leases had not been taken up? And if so—Why?

The learned "Aristotle" is puzzled to understand why we take so much trouble to criticise the merits of the mine (which, by the way, we have rather acknowledged—it is the management we have criticised); he has no doubt that "cause and effect" will elicit the information before long, and asks further if we are the parties who were connected with the "G. Vron Fawnog Mine in the same district, where upwards of 60,000*l.* was spent without finding lead or coping with the water?" We beg to inform him that we cannot remember even having heard of the "G. Vron Fawnog," and further, to come into "cause and effect" at once, we had not heard of the present Pant-y-Mwyn Company until the accounts to be presented at the last meeting at Liverpool were issued. A copy of them was sent to us, and our opinion asked as to a particular item which caused some astonishment even at Liverpool, where nearly all the shares are held. It will be found in the City Article of the *Mining Journal* for Aug. 24 (page 929). It consists of an item charged to the company of "commission of 25 per cent. on sale of 2468 shares, 2*l.* paid—1234*l.* A "Shareholder," having attended the meeting, as he says, would doubtless have heard the explanation given of this entry—that parties who were understood to have advanced money to carry on the mine were repaid by shares issued to them at 10s. discount, or 1*l.* 10s. per share. This seemed as extraordinary to us as to our informant, coming at the time the shares were quoted at a high premium and the mine was just being introduced to the London market—or rather to London—at 5*l.* each.

No doubt the directors had full power to issue these shares as they did, and at the time they did it the act may have been perfectly justifiable. But having 20,000 shares still unissued it was thought, and strongly advocated by those who knew the value of the speculation, that more should be disposed of at a premium (if to be obtained), so as to put the mine in a proper financial position (see accounts, page 929, as before), and to erect machinery that was absolutely necessary to work the mine in a proper manner. This we were told was opposed and overruled, but we have not said, or even insinuated, that the 2468 shares obtained of the company at 1*l.* 10s. were being offered again for sale at an advanced price, or that they in any possible way interfered with a further issue to raise funds absolutely required in the interests of the shareholders generally, and to get machinery which the lease when taken up would compel the directors to erect. When all these circumstances were laid before us, and our opinion asked, we did not stop to enquire into mere "cause and effect," but advocated what we conceived to be the right thing to do, and the further we investigate the more convinced we are that we have been right, and that ere long the shareholders generally will see the matter as we see it.

One word now with Capt. Hughes. We are connected with the management of a good many mines, and are always seeking knowledge and the benefit of experience. Will he tell us how to employ 50 men in raising 60 tons of lead per month, and to do it 200*l.* per month? We should like to see his cost-sheet. Our information is to the effect that the total monthly expenses are much more than he states, and here is a matter that can easily be tested.

Since the above remarks were written, in reply to letters in the Journal of Saturday last, we have received one or two explanatory communications; and in referring to them it will be seen how far we have been "misled," or otherwise, in our original information.

First, as to the leases—they have not yet been taken up; but the fault, we are assured, lies with the agents of the lords and not with the company. The "stringent clauses" as to the erection of proper machinery are said to be "imaginary," as the draft leases do not NOW contain clauses stipulating for the erection of any special kind of machinery, or engines of any "specified" size or power, but only such as *may be found from time to time needful*. In reality, this modification comes to much about the same thing, and is very different from Capt. Hughes' statement. Any practical miner can see at once what will become "needful."

Again, in reference to the issue of shares at 10s. discount, we are told that it is true the directors took shares at that price to cover advances they had made to the mine, but our attention is also called to a circular issued in November last, wherein the directors, in accordance with the powers vested in them by a general meeting, informed the shareholders that they had resolved to issue *one* thousand shares at 10s. discount, *pro rata* among existing shareholders, and that the shares were so offered to all; but the accounts show that the number thus issued was not 1000 but 2468.

We are also told that the directors are alive to the importance of having proper machinery, and that probably in the spring they may erect it, and issue more shares for the purpose of paying for it. This is the right thing to do, and just what we have been advocating, but it should have been determined upon before the winter months, when the mine may be flooded, and what is necessary to be done may be rendered more difficult to do.

SATURDAY, OCT. 12.—Market for tin shares very flat. Carn Brea, 27 to 30; Tincroft, 5 to 6; Dolcoath, 22 to 24; South Condurrow, 10 to 10½; South Frances, 4½ to 5; Van, 17 to 18; Great Laxey, 17 to 18; Roman Gravels, 6¼ to 7; Aberllyn, 11 to 13; Clementina, 1¼ to 1½; West Tolgus, 47 to 49; Pateley Bridge, 3½ to 4.

MONDAY, OCT. 14.—Market very dull. Roman Gravels, 6½ to 7; Tankerville, 3¼ to 4; East Van, 2½ to 3; Leadhills, 2 to 2½; Van, 17 to 18; Great Laxey, 17 to 18; South Frances, 4½ to 5; South Condurrow; 10 to 10¼; West Chiverton, 3 to 4; Peevor, 5½ to 6.

TUESDAY, OCT. 15.—Market again very quiet, and prices are merely nominal. Aberllyn, 11 to 13; Carn Brea, 27½ to 30; Devon Great Consols, 1½ to 2; Dolcoath, 22 to 24; Clementina, 1¼ to 1½; East Van, 2½ to 3; Great Laxey, 17 to 18; Leadhills, 2 to 2½; Parys Mountain, 4s. to 6s.; Pateley Bridge, 3½ to 4; Penstruthal, 4s. to 6s.; Roman Gravels, 6¼ to 6¾; Rookhope Lead, 10s. to 12s. 6d.; Morfa Du, 15s. to 17s. 6d.; South Condurrow, 10 to 10½; South Frances, 4½ to 5; Tankerville, 3¼ to 4; Tincroft, 5 to 6; Van, 17 to 18; West Chiverton, 3 to 4; West Tolgus, 47 to 49; Agar, 3 to 3½; Grenville, 1 to 1⅛; Peevor, 5½ to 6.

WEDNESDAY, OCT. 16.—Market continues very dull. Van weaker at 16 to 17, and Great Laxey, 16 to 17. Other prices about the same as yesterday.

THURSDAY, OCT. 17.—Market for tin shares a shade firmer. Van and Tankerville weaker. Carn Brea, 27½ to 30; Dolcoath, 22 to 24; Tincroft, 5¼ to 6½; South Condurrow, 10 to 10½; South Frances, 4½ to 5; Van, 15½ to 16½; Great Laxey, 15½ to 16½; Tankerville, 3¼ to 4; Roman Gravels, 6¼ to 6¾; Aberllyn, 11 to 13; East Van, 2½ to 3; Pateley Bridge, 3½ to 4; West Tolgus, 47 to 49.

FRIDAY, OCT. 18.—Market for tin shares again firmer. West Tolgus weaker. Carn Brea, 30 to 32½; South Frances, 4¾ to 5⅛; Tincroft, 6 to 7; Agar, 3¼ to 4; Grenville, 1⅛ to 2; Peevor, 6 to 6½; West Tolgus, 40 to 45; Roman Gravels, 6¼ to 6¾; Tankerville, 3¼ to 4; Van, 15 to 16; Great Laxey, 15 to 16; Pateley Bridge, 3½ to 4; Clementina, 1¼ to 1½; Aberllyn, 11 to 13; Rookhope Lead, ⅛ to ⅛; East Van, 2¼ to 3; Leadhills, 2 to 2¼.

Mining Correspondence.

BRITISH MINES.

ABERDAUNANT.—S. Toy, Oct. 16: The deep adit cross-cut is now driven north 8 fathoms; the ground is not quite so hard as it was last week, and we are making better progress in driving.

ABERLLYN.—John Roberts, Oct. 16: The blende lode in No. 2 adit is still looking as good as ever. In the deep adit we have cleared up to a rise about 5 fms. high, which is, as far as I can now judge, perpendicular to the sump opposite to the blende cross-cut in No. 2. I contemplate now continuing this rise to the bottom of the sump by which we shall soon get a direct road for the blende coming down to the deep adit. We have opened just sufficient ground in No. 1 for sinking the winze to No. 2, and shall commence sinking next week. The surface work is being pushed on with great speed, the cartroad to the bottom of the incline is finished, as well also as the plat for the ore-bin, and the plat for the turn-out at the bottom of the incline, and the incline will be finished in a fortnight or three weeks. We have also commenced building the wheel-pit and crusher-house, and will soon be in a forward state.

ASSHETON.—George Rickards, Oct. 5: A bargain has been let in the 50, south of Mawr's, to strip down a portion of lode preparatory to the commencement of driving on the north and south lode. The 50, east of boundary, shows nothing fresh of importance to report at present. No. 1 pitch over this level has been worked up to the level above—the 40. As, however, there are indications of the lode still standing at and above the 40, the stoping of this pitch may be continued above that level. No. 2 pitch over the 50 has slightly improved. No. 1 pitch over the 50, west of Mawr's, shows no important change. No. 1 pitch over the 20, south of Mawr's on north and south lode, shows no change to notice. There is an improvement in No. 2 pitch. The end men have pretty well prepared the 20, south of Mawr's, to drive. The air being bad we shall have to supply it by pipes until holed to Gundry's shaft. This being done, which will require about 12 fms. more to drive, will thoroughly ventilate the workings and open up this part of the mine for stoping above the 20. There appears to be considerable quantities of ground here that will pay well to stope when properly laid open. The ground is comparatively inexpensive for stoping, and much can be done at moderate expense.—Lindow's: We have commenced operations here, and the results are very satisfactory. We have eight stopes already working, producing very fair quantities of ore, all below the adit level, and have more to let that will pay very well. The prospects in this part of the mine are considered so important that arrangements are being made for the draining of the water from the 10 with the view of prosecuting the workings below the adit. We have erected a horse-whim at Lindow's during the last day or two to draw the ore, and not before it was time, as it is likely to have pretty much work. The prospects of the mine are improving. We have taken in during the last week or two a winter stock of coals for the engines. Our samplings are likely to go on and increase.

— G. Rickard, Oct. 14: In the 50, east of boundary, we have commenced driving north-east on a caunting lode, parting off to the left, by two men, at 50s. per fathom. In the 50 fathom level, south of Mawr's, the lode is being stripped down in the west side of the level by two men, preparatory to commencing ing to drive on the north and south lode. The shaftmen are engaged taking up water in the adit level, preparing to fix lift in Lindow's shaft, &c. The 20 on north and south lode is being driven by four men. No. 2 pitch over the 50, east of boundary, is being worked by four men, at 4*l.* per ton for lead. No. 1 over the 50, west of Mawr's, by four men, at 6*l.* per ton. No. 1 stope over the 20 south of Mawr's, on the north and south lode, by four men, at 4*l.* per ton. No. 2 by two men, at 6*l.* per ton. No. 1 below the 8 (Gundry's), on north and south lode, by four men, at 4*l.* per ton. No. 2 below the 8 (Gundry's), on north and south lods, by four men. The men in this pitch are doing preparatory work in clearing the deads, putting in timber to secure the levels, &c., so as to get the pitches in proper working order. No. 1 pitch below the adit (Lindow's), on north and south lode, is being worked by three men, at 6*l.* per ton. No. 2, by two men, at 4*l.* 10s. per ton. No. 3, by three men, at 6*l.* per ton. No. 4, by two men, at 5*l.* per ton. No. 5, by three men, at 4*l.* per ton. No. 6, by two men, at 5*l.* 10s. per ton. No. 7, by two men, at 5*l.* 10s. per ton. No. 8, by two men, at 5*l.* 10s. per ton. All the pitches have 15s. per ton for blende. In the course of a very quick time the lift will have been fixed to Lindow's, and horizontal rods fixed at surface to connect them with the engine, so that this part of the mine will have been drained and thrown open for operations generally. Everything is being pushed on with as much speed as circumstances will admit.

BETTWS Y-COED.—H. T. Haley, Oct. 14: Saturday last being our monthly setting day, we set the shallow adit to drive east by four men, one month stent, at 2*l.* 7s. 6d. per fathom. We shall drive on the north or hanging part of the lode, which part is worth 15 cwts. of lead ore per fathom, and looking well; the lode is too large to allow carrying both walls. The shallow adit west is suspended, as we have holed to the winze; the whole of this drivage, as well as the sinking of the winze to the deep adit, has been through a good lode. The deep adit is also communicated with the winze by a cross cut, and the lode at this end is looking very promising; we have set this end to a full pare of men (six) to drive east at 3*l.* 10s. per fathom. It is important that we push on this point with all speed, in order that we may open out for stoping the lode we have driven through in the shallow adit level. We have a fine course of ore all along in the bottom of the shallow adit; and, as the deep adit is 12 fms. under the shallow, it will be seen that we have a good section of ground for stoping by the time our dressing machinery is in order, which work is being proceeded with as fast as possible. The masons are now building the walls of the pumping wheel pit, and if the present favourable weather continues for another fortnight we shall have them up. The carpenters are busy putting up the crusher-wheel.

BLUE HILLS.—S. Bennetts, P. Bennetts, Oct. 12: The Pink lode in the 80 east end is 3 to 4 ft. wide, of a promising character, and worth 7*l.* per fathom. The north lode in the 30 east end continues to open out well, and is worth 12*l.* to 14*l.* per fathom.

BODIDRIS.—H. Hotchkiss, Oct. 16: We have this morning succeeded in communicating the easternmost shaft with the rise in the 45 by a drill hole. I have let the shaftmen a lump bargain to complete the sinking of this shaft to the 45, to case, divide, and put in ladders from surface down for the sum of 20*l.* The lode in the bottom of the shaft is 3 ft. wide, mixed with blende and a little lead ore—a most promising lode. The 45 men I have now put to cut up the bottom of the level, and to widen the same east of shaft about 3 fms., preparatory to driving this level east, for the lump sum of 160s.; when this is done we shall commence to drive east on the lode, when I expect shortly to meet with good results. By the time the shaft is completed to this level these men will be sufficiently advanced so as not to hinder the shaftmen commencing to sink another length under this level, which is highly important it should be done with a full pare of men to enable us as soon as possible to get down to the next run of ore ground seen in this level back west. There is no change in the 60 winze calling for remark. The stope in the 20, which for the last few weeks has fell off in value, has again improved for ore, and is looking most promising.

BROWNGELLY.—P. Temby, Oct. 17: The shaft is sunk about 12 fms. on the course of the lode. In the first 8 fms. the lode is from 6 to 7 ft. wide, and sometimes larger, composed principally of a mass of copper gossan. At this point it passed through a small elvan course, which changed its character, and it became more defined and mineralised, showing good spots of copper ore and mundic. At the bottom of the shaft it has further improved for copper. Samples are forwarded to the office taken from the lode this morning. Considering the size and character of the lode I am decidedly of opinion that the shaft should be sunk and the mine fully explored, when I hope there will be a further improvement for copper in depth. We have erected the horse whim, shaft tackles, &c., and with the lift of pumps we can sink another 10 or 12 fms. by horse-power.

CAMBRIAN MINES.—T. Glanville, Oct. 14: ESGAIR-FRAITH: Eastern Shaft: In cutting south into the lode west of shaft, and about 8 yards above the 70 yard level, we have discovered some very fine lead ore; up to this date it is 3 ft. wide, and we have no indication as yet of getting through it. By its appearance I am led to believe it is going down behind the copper part of the lode and east of shaft. I shall, however, be in a position to send you further particulars in the course of a few days; but, as so far seen, this is undoubtedly a magnificent discovery. We are now cutting plat in bottom of shaft, and when this is finished we shall immediately fix lift, and recommence sinking with all possible dispatch for another level. In the 70 yard level, west of shaft, we are driving on the copper part of the lode, which is yielding 1 ton of rich copper ore per yard. In the 46, west of shaft, we are driving through a mass of sulphur intermixed with large stones of lead ore.

COMBMARTIN.—T. Harris, T. Comer, Oct. 17: Fair progress is being made in the various points in the mine, but we see little or no change in the appearance of the points of operation since we last reported.

DE BROKE.—J. Phillips, Oct. 16: At the 55 east we are gaining southward in driving; this part of the lode produces strings of lead ore, quartz, &c., of an encouraging nature. The other drivages are without alteration to report. The eastern stope in the back of the 45 requiring more ventilation, the men have been removed to sink a winze from the 35, in which the lode is 6 ft. wide, and will yield about 20 cwts. of lead ore per fm. A stope in the back of the 35 is worth 20 cwts. of lead ore per fathom, and another stope in the back of the 25 is worth 25 cwts. per fathom. I intend to sample 20 tons of lead ore on Saturday next the 19th inst.

D'ERESBY MOUNTAIN.—John Roberts, Wm. Sandoe, Oct. 16: In the bottom of the No. 1 end we have again a good branch of lead, and in the breast good gossan and blende; we repeat that we fully believe that this level is being driven on the top of a good run of ore ground, and as soon as ever convenient the No. 2 should be driven to come under it. The No. 3 rise is looking very well; the lode is full 3 ft. wide, with a good mixture of lead and blende, and should it continue up to the winze said to be so rich, we shall have a good piece of stoping ground. The No. 4 stope is without any change to notice; we have completed the diverting of the tramway at the winze to No. 5, and commenced putting in ladder road, and shall begin to clear up forthwith. In the No. 5 we have cleared and made good since last report about 5 fms.—Surface: We have been engaged the last fortnight laying down the detail of the dressing-floors, which are just now complete for the time being except the round buddle, which we must put in as soon as convenient. The machinery works well, and shows that it it is quite effective, as we have only yet treated the poorest stuff. We have kept to this class of stuff purposely, that no ores might be lost in the new floors, which would have been the case had we commenced on the richer stuff. We have not been able as yet to fix the stone breaker, but we shall start on it at once, and shall shortly get it to work.

D'ERESBY CONSOLS.—John Roberts, Wm. Sandoe, Oct. 16: The large vugh still continues in the end on the east and west lode, and very good spots and strings of lead and blende ores making their appearance; it is still letting out a great quantity of water.

DENBIGHSHIRE CONSOLIDATED.—R. Prince, Abel Francis, Oct. 17: Very satisfactory progress has been made in extending the 112 east during the past month. The sides of the lode are well defined, its width being fully 4 ft. A very favourable change has taken place in the 112 west, showing undoubtedly that we are nearing a run of lead, which we think will turn out well. The 66 west (the 80) is now paying the company handsome profit upon the outlay expended. The lead raised therefrom is splendid. We have again brought to surface a further drawing, and the washing-floors have during the week presented a very animated and encouraging appearance.

DEVON GREAT CONSOLS.—Isaac Richard, Oct. 17: New Shaft, New South Lode: In the new shaft, below the 190, the lode—part being carried about 2 ft. wide—is composed of capel, quartz, peach, prian, mundic, and some copper ore of good quality. In the 190 east the lode—part being carried 5 ft. wide—is composed of fine capel, quartz, peach, and copper ore, worth 1 ton, or 3*l.*, and 3 tons of mundic per fathom. In the 190 west the lode continues of large size, and 6 ft. being carried is composed of very fine capel, quartz, peach, prian, and copper ore, worth 3 tons, or 9*l.*, and 5 tons of mundic per fathom. In Floyd's winze, in the bottom of the 175 east, the lode—part carrying 4½ ft. wide—is worth 6 tons of copper ore, or 12*l.*, and 6 tons of mundic per fathom. In the 175 west the lode is 5 ft. wide, and worth 3 tons of copper ore, or 9*l.*, and 4 tons of mundic per fm. In Hockaday's winze, in the bottom of the 175 west, the lode is 4 ft. wide, and worth for length of winze—9 ft.—2 tons of copper ore, or 6*l.*, and 3 tons of mundic per fathom. In the 160 east the drivage is being carried by the side of the lode for more speedy progress. In the 130 east the lode is 3 ft. wide, composed of capel, quartz, mundic, and a little copper ore. At the railway shaft it has been found necessary to change the working-barrel, and some other portions of the pitwork, preparatory to sinking below the 160, which is being accomplished as fast as the nature of the work will admit. There is no alteration of importance at any of the other points of operation throughout the mines since last advice.

DUBBY SYKE.—W. Vipond, Oct. 12: There is no change to notice in the end going east on the vein this week. I have had the two men who are driving this part of the week at the shaft timbering it; it will take them about two days more to finish it. In the west end, to the south of the intersection with the cross vein, there appears to be nothing but plate; the limestone must be entirely below this random, west of the cross-vein. I have discontinued this for the present, as I see no prospect of meeting with any ore at this point in either vein with one cheek entirely plate.

EAST VAN.—Wm. Williams, Oct. 15: The 70, east of Tempest shaft, on the north part of the lode, is driven 5 fms., and is now set to four men, at 90s. per fathom; this end is poor at present. The same level, west of shaft, is driven 9 ft.; set to six men, at 80s. per fathom. The lode here seems to open out. There is a little water issuing from the end, which shows irregular spots of lead.

GLASGOW CARADON CONSOLS.—Wm. Taylor, W. J. Taylor, Oct. 14: We are making fair progress in the sinking of Elliott's shaft, which is now down 10 fms. 1 ft. below the 90; we shall sink 3½ fms. more to make the required depth for tip-plat and fork below a 120 fm. level; we hope to accomplish this work in about two months from this time. The lode by the time the shaft is down will be very near it, and the ground is of the most favourable character for producing ore. In the 90 west we are driving on the branch recently cut there; it appears to be taking off towards the north lode, and is producing stones of ore, we shall follow it on a little further before cross-cutting north to the main lode. In the winze coming down from the 78 before this point this lode is looking well, worth from 12*l.* to 15*l.* per fathom. The 90 east is worth 5*l.* per fathom; this end is looking better, and we hope soon to have a more valuable lode. The winze in the bottom of 78 before this end is worth 15*l.* per fathom. In the 78 east we are still cross-cutting south, but the ground is hard, and we have not met with any lode to value yet. In Midway east the ground is favourable, and lode kindly, showing some good ore and mundic. The stopes and pitches throughout the mine continue to return their usual quantities of ore, varying in value from 12*l.* to 35*l.* per fathom.

GLENROY.—R. Rowe, Oct. 16: The lode in the shaft sinking below the 80 is from 3 to 4 ft. wide, and on the footwall part there is a mixture of lead and blende; the ground is getting harder about the lode, which I prefer seeing to the slidey ground the shaft has been going through for some time.

GORSEDD AND MERLLYN CONSOLS.—W. Edwards, Oct. 17: In the crosscut north from the bottom of shaft we have passed through a rich feeder to the vein, and it is satisfactory to note that we can now see the reason of it dipping faster at this point than in the level above. The ground is highly mineralised, and we are looking for a great discovery quickly. In the rise from the roof of the 70 west we are up 6 yards; the lead is splendid, and gets more solid as we go up. The tribute pitch above the 70's is yielding well.—List of Settings: North and south cross cuts, 7*l.* 10s. per yard. The 70 to rise at 3*l.* 5s.—Tributers: The roof of the 70 at 5*l.* per ton; at Gorsedd 6*l.* per ton.

GREAT HOLWAY.—Oct. 17: The communication with Garden shaft was made about 30 yards east of it, and about 12 yards above the adit level, so that we have about 12 yards of the lode to get down to the level. We have a strong healthy-looking lode, producing very good lead and blende, and you will be glad to hear that I have let a bargain to 16 men to raise lead at 6*l.* per ton, and for blende 30s. per ton, the men to pay all costs, and to deliver lead into the dressing house ready for market. As per your instructions, I have let the dressing of all on surface at 15s. per ton.—Surface: Here we are getting on remarkably well. The engine-house building will be up to the cylinder-floor by Wednesday next, and everything is being prepared in a substantial manner. We have received a further tribute from True Blue, and the prospects there are good.

GREAT RETALLACK.—T. Harris, Oct. 17: I have set a bargain to sink the boundary shaft 12 fms. by six men for 25*l.*, the men to pay all cost in connection with their working and the hauling of the stuff. I hope they will accomplish the work in one month, so as to get down to the tribute ground.

GREEN HURTH.—W. Vipond, Oct. 16: The sinking below the incline level is now driven 3 fms. 6 in.; still quite clear of water. We have two small strings running diagonally through the sump; both have some ore in them, though not to value—they are yielding a little saving work, which we are bringing out for dressing. These indications are very good, as we are still in grey beds, and I have no doubt but we shall find the vein productive when we get hold of it, as we shall do in going deeper. The stope on the east and west vein is yielding about 6 cwts. of ore per fathom, and the stope on No. 3 cross-vein about the same quantity. The working below the adit level is yielding 10 cwts. of ore per fathom; but, of course, the work is more difficult to get out the deeper we go in this. The Jacky quarry level has not got clearly into the vein yet; we cut into the east side of level this week about 3 ft., and the vein or branch presents the same appearance there at the bottom of limestone as it did in the Quarry before we commenced to drive. We are progressing with clearing up the run in Bodder Mea level, but not quite so fast as we should do if we had two men working at it continuously. I expect we shall get a wagon of ore off next week.

HARWOOD.—W. Tallentire, Oct. 11: Herdship: South end working is producing about as last week—8 cwts. of lead ore per fathom. The vein has this week been very kindly, and is likely I think to produce a great deal more ore than it is doing at present. We have driven from the wagon-way south on the line of this vein 24 fms. I expect we shall now very shortly intersect the east and west vein, known as Dry Gill vein, a point of great importance to this mine.

HINGSTON DOWN CONSOLS.—Thomas Richards, Oct. 17: Bailey's Shaft: In the 172 east the lode is of great promise, and is worth 6 tons of ore, or 6*l.* per fathom. In the stope in the back of the 172 east the lode is worth 7 tons of ore, or 25*l.* per fathom. In the 172 west the lode is large; the part being carried—5 feet wide—contains capel, quartz, and mundic, with a little good quality copper ore intermixed throughout, and has a promising appearance. In the 160, west of Nicholls' winze, the lode continues without change. In the tributers' sink in the bottom of the 160, the lode is still very promising, and is of the same value—15*l.* per fathom. In the tributers' stope and pitch in the back of the 110 the lode is producing some good saving work. Fair progress is being made in the deep adit.

LADY WELL.—Asthur Waters, Oct. 17: There is no change here worthy of remark since my last report. We shall sample 25 tons of lead ore next week

LEADHILLS.—Arthur Waters, Oct. 17: Brow Vein: Stope in back of the 60, south of Glengonar shaft, by two men, at 30s. per fathom and 20s. per ton, lode worth ¾ ton per fathom. No. 1 pitch in back of this level, south of shaft, by three men, at 110s. per ton. No. 2 pitch, north of shaft, by two men, at 110s. per fm. Stope in back of the 20, north of shaft, by four men, at 100s. per fathom and 10s. per ton, lode not to value. Tribute pitch in back of Gripp's, south of shaft, by two men, at 110s. per ton. No. 2 pitch, south of ditto, by two men, at 110s. per ton.—Hopehead Tribute pitch in back of 20, north of shaft, by two men, at 110s. per ton.—Hopehead Vein: Tribute pitch in back of Gripp's north, by three men, at 110s. per fathom.—Dobie's Vein: Tribute pitch below adit, south of Muir's cross-cut, by four men, at 160s. per fathom.—Muir's cross-cut to drive west of Glengonar, by four men, at 160s. per fathom.—Muir's cross-cut to drive west of Glengonar, by four men, at 160s. per fathom.—George's Roust Vein: Gripp's adit to drive north of Muir's cross-cut, on the above lode, by four men, at 90s. per fathom and 10s. per ton; a rising kindly lode, but without ore to value.—Brown's Vein: Jeffrey's shaft to sink below the 65, by six men, at 260s. per fathom and 10s. per ton; vein improving in character as we go down. The winze below the 55, south of shaft, by four men, at 120s. per fathom and 10s. per ton, lode worth 3½ tons per fathom. Present depth of winze, 5 fms. 5 ft. 6 in., and the lode is worth 3½ to 4 tons per fathom throughout. No. 1 stope above the 55, south of shaft, by four men, at 50s. per fathom and 10s. per ton, lode worth 3½ to 4 tons per fathom. No. 2 stope, south of ditto, by four men, at 60s. per fathom and 10s. per ton, lode worth 25 cwts. per fathom. No. 3 stope, south of ditto, by four men, at 60s. per fathom and 20s. per ton, lode worth 22 cwts. per fathom. Stope in back of 55, north of shaft, by four men, at 55s. per fathom and 10s. per ton, lode worth 16 cwts. per fathom. Pitch in bottom of the 30, south of shaft, by two men, at 110s. per ton. Pitch in back of 30, north of ditto, by four men, at 110s. per ton. Winze below Gripp's, south of shaft, put behind the end, by four men, at 100s. per fathom and 10s. per ton, lode worth 2 tons per fathom. Tribute pitch above adit, south of shaft, by four men, at 100s. per ton.—Raik Vein: Watson's shaft to sink be ow the surface by six men, at 16*l.* per fathom; present depth 51½ fms., leaving about 10½ fms. between present bottom and Gripp's adit level. The 20 to drive south of No. 2 winze, south of Reid's shaft, by four men, at 75s. per fathom, and 7s. per ton; the lode in the back of the end is worth 3 tons, in the middle of the end 5 tons, and from thence to bottom of the level at the rate of 6 to 7 tons per fathom. Taking the end altogether the lode will average 1 ft. wide, of nearly solid ore, and may be valued at an average of 6 tons per fathom; the lode is 5 ft. wide, having nearly perpendicular walls, contains more spar than we have ever seen on Raik vein before, and the bunch of ore in sight looks like the top of a new run of ore ground. The new winze in the 16, south of No. 2 sump, to go down in a line with the present 20 end, by four men, at 60s. per fathom, and 7s. per ton; lode worth 3 tons per fathom. The 10, north of No. 1 sump, by four men, at 80s. per fathom, and 7s. per ton; lode worth

20 cwts. per fathom. The stope in back of the 10, north of No. 2 winze, by four men, at 20s. per fathom, and 7s. per ton; the lode is worth 3½ tons per fathom. No. 2 stope, north of ditto, by four men, at 25s. per fathom, and 10s. per ton; lode worth 3 tons per fathom. Gripp's adit to drive south of Reid's shaft, under the old workings, by four men, at 65s. per fathom, and 10s. per ton; lode at present not to value.

We have to drive this end about 50 fms. further to get opposite Watson's shaft. It will then require a cross-cut of 5½ fms. east to connect the level with the shaft. The tribute pitch in back of Gripp's, north of Jeffrey's cross-cut, by three men, at 110s. per ton. The pitch below the said level north by four men, at 110s. per ton. A drift south of trial shaft from surface by two men, at 20s. per fathom, and 10s. per ton; lode not to value.

Jeffrey's Vein: Gripp's adit, north-west of Raik vein, Reid's shaft, by four men, at 100s. per fathom and 10s. per ton; lode not to value. No. 1 stope in back of the level north-west, by four men, at 55s. per fathom and 20s. per ton; lode worth 15 cwts. per fathom. No. 2 stope, north-west of ditto, by four men, at 60s. per fathom and 20s. per ton; lode worth 2 tons per fathom.—Mill Vein: The tribute pitch in back of adit, south of Marr's sump, by two men, at 100s. per ton.—Caise's Vein: Tribute pitch below adit, south of Moss shaft, by three men, at 110s. per ton.—Glenea Vein: To drive eastward on Glenea hill from trial cross-out, by two men, at 30s. per fathom. We hope to finish the brick arching of the new flues connected with the smelting works this week, and calculate completing them entirely, including the paving with flags the whole of the bottom of said flues, in a month from now. Ore broken unwashed, 170 tons; ore in slime, &c., unwashed, 100 tons; ore washed on hand, 315 tons: total, 585 tons. Pig-lead on hand, 2947 bars=(say) 147 tons 7 cwts. Referring back to Muir's cross cut I would remark that we have about 5 fathoms further to drive to intersect East Staywoyage vein, which is looked upon as one of the principal side lodes.

LIVINGSTONE CONSOLS.—Wm. Vivian, Oct. 17: In the 30, driving west of shaft, the lode is 3 ft. wide, and has a very promising appearance, producing copper and tin. There is no change to notice in the 40 since last week.

MELLANEAR.—John Gilbert, Oct. 16: The 30, west of cross-cut, was driven last month 5 fms. 0 ft. 6 in.; the lode is now 2 ft. wide, and worth 1 ton of ore per fathom, but at present is rather disordered. The 40, west of No. 2 rise, west of Grundy's shaft, was driven 5 fms. 2 ft.; the lode is 4 ft. wide, and worth 4 tons of copper ore per fathom, and some good saving work for lead. No. 2 rise, in the back of the 40, west of Gundry's shaft, is about 22 fms. to the west of No. 1 rise; the lode is 5 ft. wide, and worth 4½ tons of ore per fathom. The 50, west of Gundry's shaft, was driven 3 fms. 3 ft. 6 in.; the lode is 3½ ft. wide, and worth 3 tons of ore per fathom. The rise in the back of the 50, west of Gundry's shaft, was put up 1 fm. 2 ft.; the lode is 3 ft. wide, and worth 2½ tons of ore per fathom. The 60, west of Gundry's shaft, was driven 3 fms. 4 ft. 6 in.; the lode is 3½ ft. wide, and worth 3 tons of ore per fathom. The winze in the bottom of the 60, west of Gundry's shaft, was sunk 1 fm. 3 ft. 6 in.; the lode is 4 ft. wide, and worth 2 tons of ore per fathom. The 70 fm. level, west of Gundry's shaft, was driven 5 fms. 5 ft. 6 in.; the lode is 6 ft. wide, and worth 3½ tons per fathom. This is a very fine lode, considering the easy character of the ground for driving in. The winze in the bottom of the 70, west of Gundry's shaft, was sunk 2 fms. 1 ft. 7 in.; the lode is 5 ft. wide, and worth 2 tons of ore per fathom, with more ore standing on the south side. The 80, west of Gundry's, was driven 5 fms.; the lode is 4 ft. wide, and worth 1 ton of ore per fathom, and looking very promising for further improvement. The 90, west of Gundry's shaft, was driven 2 fms. 1 ft. 6 in.; the lode is 4 ft. wide, producing good stones of copper and lead ores. The 100, west of Gundry's shaft, was driven 1 fm. 2 ft. 6 in.; the lode is 6 ft. wide, full of large fissures, and producing good stones of ore. This end is also letting out a large quantity of water, so much so that it has almost drained the 80 and 90, west of shaft. The 100, east of Gundry's shaft, was driven 4 fms. 3 ft. 6 in; the lode is 5 ft. wide, and worth 1 ton of ore per fathom, and letting out a large quantity of water. The 100, west of the skip shaft, was driven 5 fms.; the lode is 3 ft. wide, and producing some good saving work for copper ore. We sampled yesterday (computed) 569 tons of copper ore

MINERAL CORPORATION OF GREAT BRITAIN (HAFNA MINE).—Wm. Bennetts, Oct. 16: No. 1 Adit: There is nothing new in the end since last week's report. The men have been engaged clearing the accumulated staff. The stope in the back of No. 1 adit is looking well. I weighed two large rocks of lead to-day broken from the lode—one weighed 215 lbs., the other 280 lbs. I have not seen such rocks of solid lead since I left the Chiverton district. At Nos. 2 and 3 adits there is nothing new to report. I have taken the men this week from the above to clear up a shaft sunk from surface, so as to ventilate No. 2 level. As No. 4 adit we have cut into the lode about 8 ft., and no signs as yet of the hanging-wall; lead still in the forebreast. A more detailed report shall be sent next week for the board meeting.

MONYDD-GORDDU (Lead).—J. G. Green, Oct. 17: The 34 cross cut is in from shaft 9 fms., which together with width of shaft, makes 10 fms. the width of lode as far as proved; the present forebreast is in a hard compact lode of a more promising description than anything seen at this level hitherto. The branches of which this great mass of lode is composed appear on its south side or that part nearest shaft to be underlaying south the same as in the workings above, whereas on the north side in present end of cross-cut they (the branches) appear to be underlaying north. The 24 west has improved in appearance, and is letting out more water; I look for an improvement here at an early date. The stope over this level continues in a rich lode, some magnificent stuff having been broken during the last few days. There is no other change to notice. Tenders for 20 tons of good quality lead are due in London on the 19th inst., and we are in a forward state for another sampling.

MORFA DU.—T. Mitchell, Oct. 16: I am glad to inform you that the bottom level continues to look very well. The lode at present will yield 7 tons of bluestone (zinc ore) per fathom. We have stripped down a part of the lode standing by the side of the level, close by the forebreast, and find it contains more bluestone. The lode in the winze is also yielding some good ore. The men are getting on very well with the sinking, and we hope to get the winze holed through to the 36 by the end of this month. We estimate the quantity of bluestone now at surface broken from the bottom level at about 90 tons, and we hope by the end of this week to make it fully 100 tons.

NEW SOUTH MERLLYN.—R. Rowlands, Oct. 17: The sump in the north is going down well, and I am sanguine of very good results.

PANDORA.—H. Nottingham, Oct. 16: We have the engine all put together again, and are in readiness for the new pumping gear, which we expect to arrive at Llanrwst to-day. We are keeping the big wheel going at full speed, but the water is not sinking so fast as it did last week. The heavy rains we had last week will in a measure account for this, and the drainage of the ground above the 23. We are doing our best to get the mine clear as soon as possible, that we may resume work, and we shall recommence dressing as soon as we have the 23 fathom levels clear, as we have stuff lying broken ready to come up.

PARYS MOUNTAIN.—T. Mitchell, Oct. 16: The ground in the 90 south continues of the same character as for some time past, consisting of chert, intermixed with small strings or veins of copper and sulphur, which probably may be feeders to some large bunches of ore not far distant. We have this week commenced cleaning up the precipitation pits.

PATELEY BRIDGE.—Charles Williams, Oct. 17: With the exception of a slight improvement in Pringap, where the vein is becoming easier to work, and showing little more lead, there has not been any change of note during the past week.

PENHALLS.—S. Bennetts, P. Vian, Oct. 12: The north part of the lode in the 70 east has just been cut into, and found 2 ft. wide, and worth 8*l.* to 9*l.* per fathom. The west end at this level is worth 7*l.* per fathom. The 60 east, on the north part of the lode, is worth 6*l.* per fathom. The 55 east, on the south part, is worth 7*l.* per fathom, and the 48 west 7*l.* per fathom.

PENNANT.—Oct. 17: We are driving the cross-cut in the 113 west of engine-shaft to intersect the lode proved in the 80. From the 80 west we have obtained since our last report some of the finest lead ever taken out of the mine. During the last two or three days the lode has become wider, and I think the lead bearing portion will be looking even better by the end of the present week than before. This is very important, seeing that this lode is in entirely undeveloped ground, and should give us lasting returns. The dressing-shed presents a cheering appearance. There is no other change.

PICTON.—John Woolcock, Oct. 15: Since my last report (Oct. 1) the ladder-way to the 126 yard level has been made perfectly secure, and instead of sending 10 tons of merchantable ore to surface I see my way to sending 20 tons to surface at the least, and probably much larger quantities every month. You must remember that although the machinery for hoisting and crushing is all complete, I have to wash and dress the ore, and the jiggers not being yet delivered, although with plenty of ore on surface I am not able to make it merchantable for the moment, and I think it is only fair to myself that as you keep a month's wages in hand from the workmen you ought to allow me a month's time to make the lead raised to surface merchantable. From what I see you have one of the most successful mines that have of late years been opened out in this district, in which your returns upon the capital invested must be enormous. We are still breaking good lead stuff for the dressing-floors, and I hope to be able to commence sinking the engine shaft next week.

PRINCE OF WALES.—John Andrews, Oct. 16: There is no change in the pitch in the back of the 24 on the silver lode.

ROMAN GRAVELS.—Arthur Waters, Oct. 17: We are going on regularly with the sinking of the new south engine-shaft below the 110: ground as for some time past. The 110 north of shaft is worth ½ ton per fathom, and improving. The 110 south is worth 1 ton per fathom. The 95 south is worth 3 tons per fathom. The 80 south is worth 3½ tons per fm. The 65 south is twitched up a little, now worth 1 ton per fathom. The 40 south is worth ½ ton per fathom of lead ore and 1 ton of blende per fathom. Stopes as for some time past. We have to-day sampled 180 tons of lead ore and 30 tons of blende.

ROOKHOPE.—T. Davidson, Oct. 17: Adit Level: In stoping No. 12 on section the ore will be cut out to plate bed in a few days; the vein is badening very rapidly to the north, on which side I think we have the little limestone above us still, and her next object will be to put a rise further up in order to prove this. Stoping over adit level roof Nos. 11 and 12 on section; value 16 cwts. per fathom. Stoping over adit level No. 6 on section; value 8 cwts. per fathom. The above east of Gin shaft. Over the 15 we are preparing for stoping in No. 5, on section east of Gin shaft, by walling up rises, and filling up ground; value 8 cwts. per fathom. Over the 42, driving east from old winze, 4 fms. below the 25 fm. level sole in No. 5 on section east of low shaft, is valued at 12 cwts. per fathom. In driving west from same point in No. 3, on section, the vein is very hard, but well mineralised; value, 10 cwts per fathom. Rising over the 42 in No. 8, on section, east of low shaft; value, 6 cwts. per fathom. The rise from the 42 in No. 7, on section, is holed through to the old winze from the 25; at present we are enlarging the top part of the rise, after which it will require securing with timber and sheeting up in order to get the work down to the 42 from any upper workings.

SOUTH CAMBRIAN.—A. Francis, Oct. 15: The deep adit level east continues to improve, producing blende of the best quality. The men enlarging the level for the railway are making good progress, and are also breaking good stuff for dressing, which is daily increasing our quantity of ore on surface. I can now speak with confidence as to the future prospects to investors of this valuable mine.

SOUTH CONDURROW.—W. Rich, W. Williams, Henry Abraham, Oct. 16: The lode in the 30 end, east of engine-shaft, is worth 8*l.* per fathom. The 30 west carries low quality tinstone; we are driving this end towards the cross-course, and to communicate with the rise put up in the back of the 40 for ventilation. The 30 east and west are yielding low-quality tinstone. The 50, west of Plantation shaft, is worth 8*l.* per fathom. The 50 east is unproductive; this end is being driven on the soft part of the lode, so as to communicate with the 50, west of cross cut, as speedily as possible. The 50, west of King's, is worth 9*l.* per fathom. The rise in the back of the 50 west is worth 30*l.* per fathom. The 50 end, east of King's, is worth 10*l.* per fathom. The winze in the bottom of this level is worth 9*l.* per fathom. The rise in the back of the 60 east carries stones of tin. The 70 east is unproductive. The rise in the back of the 93 west is worth 9*l.* per fathom. The rise in the back of the 93 east is worth 12*l.* per fathom.

SOUTH DE ERESBY MOUNTAIN.—Wm. Bennetts, Thos. Bennetts, Oct. 16: The ground in the cross-cut in No. 1 adit is all that can be desired for the production of mineral when the lode is intersected.—No. 2 Adit Level, No. 1 Lode: We have not as yet taken down the main leady part of the lode, neither shall we do so until the rise is communicated. The large lode in No. 2 adit level is looking well, producing some good lead work. The rise in the back of No. 2 level rising in No. 1 lode is now up 2 fms.; lode looking well, especially in the north end of rise, quite as good as when we cut into the lode in driving where we had the large large lumps of solid lead.

SOUTH MOLTON CONSOLS.—T. Harris, T. May, Oct. 17: We have to-day set the adit level to drive towards the lead lode, by six men, at 7*l.* per fathom, until our November setting. The ground at present is stiff for driving in, but we are hoping that a change for the better will soon take place, and shall have to report good progress. We have placed men to costean for another lode we suppose to run through the south ground, which we hope to prove in a few days.

SOUTH ROMAN GRAVELS.—J. W. Powning, Oct. 17: Shelve: We got the engine, with winding gear and pilwork attached, fixed, and started it to work this morning. I am pleased to say everything with the exception of the smoke-flue acts first-rate; this is easily remedied by fixing a door or two in the cowls, which, of course, will be attended to at once, after which we shall push on the sinking of the winze with all speed possible.

SOUTH TOLCARNE.—Wm. Rich, J. Knotwell, Oct. 16: The lode in the 24 end west is about 2 ft. wide, composed of fluor-spar, with good spots of copper intermixed; a promising looking lode. There is more water coming from the 36 end east, which we take to be a favourable indication that the lode will soon open out wider, and we trust more productive.

ST. PATRICK.—Wm. Francis, Oct. 17: I am glad to report that the cross-course in the 120 yard level north cross cut is widening, and still making more westward on the hanging side, and I should judge from its very favourable appearances that an important change is not far before us. There is no change to note in the 60 yard level north. The chert is all that could be wished for as good measures for ore deposits, and I feel confident of success when a vein is intersected here.

TANKERVILLE.—Arthur Waters, Oct. 17: Watson's shaft is being sunk below the 206 by nine men, at 20*l.* per fathom for 14 fms. certain. The 206 west is worth 1½ ton of lead ore per fathom, and improving. We expect to meet with a large cavity as we go forward here. Between the shaft cross cut and Hooton's winze, along the bottom of the 206 east, there is a lode 7 ft. wide, and a course of ore varying from 4 to 7 tons per fathom. The 206, east of Hooton's winze, towards No. 2 winze, is worth 2 tons per fathom. We have about 3 fms. further to drive to get under the said No. 2 winze. The stopes in the back of the 206, east and west of the shaft, are yielding ore as valued in last week's report. No. 2 winze, below the 192 east, is down within 9 ft. of the 206, but we have had to suspend the sinking on account of the water. There is a good course of ore all the way down this winze, and for several fathoms along the bottom of the 192, east of winze; and, looking at the increased flow of water referred to, which is three times as much as we ever had before on Tankerville lode, we are of opinion that one of the side lodes has come in junction (an underlie) with the main lode in the east end of the mine. We hope in a month from this date to drive the 206 up and cut down the water in question. We have eight men driving the said end, who work from Monday morning until eleven o'clock on Saturday night, hoping that when this interesting point is laid open an important discovery will be made. The winze below the 192, 25 fms. west of shaft, is going down in a lode worth 2 tons per fathom, and improving. The stopes in back of this level, and other points above, including the tribute pitches, are just as last reported.

TEMPLE.—Oct. 16: No 1 level is set to drive west for the next two months to six men, at 7*l.* 5s. per fathom; the lode is carried the width of the level, and is composed of clay-slate, quartz, carbonate of lime, with blende, lead, copper, and iron pyrites in small quantities, but increasing in its produce of lead very considerably. No. 2 level is set to drive west for the coming two months to six men, at 8*l.* 15s. per fathom; the lode here produces its average quantity of lead—about 2 tons per fathom. No. 3 level is set to drive west for the next two months to six men, at 8*l.* 10s. per fathom; the lode here has considerably improved, and is producing now fully 1½ ton of lead ore per fathom. The winze sinking below the No. 3 level is set to six men, at 9*l.* 10s. per fathom for the two months ensuing; it is being sunk by the side of the lode. The erection of the crusher is being pushed on, and the masons are engaged building the upper walls of the crusher-house. The pit for the second water-wheel is now excavated, and ready for the masons to build up the walls of the pit previous to erecting the wheel, which is already prepared, and will be delivered on the mine at once. The excavations for slides and floors are now nearly completed, and the engineers are engaged in making the necessary automatic jigging machinery, round buddles, and other dressing apparatus. The weather is not so favourable for surface work as it has been, but good progress is being made.

TOLGUS CONSOLS.—W. C. Vivian, Oct. 17: We are still passing through lodestuff in the cross-cut; but, judging from the powerful jets of water that are issuing from every part of the forebreast, I believe that the richest portion is still ahead, and I look forward with confidence to the result of the next few days working.

WEST ASSHETON.—George Rickard, Oct. 5: In the 40 cross-cut, south of boundary shaft, lead ore has been intersected, and it is quite clear a portion of the lode has been hitherto undisturbed here, which is not unlikely to turn out to be of some value upon being further opened on. No. 1 pitch in the back of the 50 has considerably improved. The winze being sunk below the 50 has been holed to a rise over the 60 by a bore-hole, and in the course of a few days will be fairly cut down to admit of ventilation and traffic, and lay open some tribute ground. Upon the whole the pitches in the back of the 60 are improving. The lode in the 60 west has improved. The cross-cut south in this level is not through the portion of lode allowed to stand yet; it is spotted with ore in the present end. We have taken in during the last week or two a winter's stock of coals for the engines.

— Oct. 14: The 50 west is being driven by six men, at 5*l.* per fathom; the lode is large, yielding blende and lead ore. The present end is opening tribute ground. The cross-cut south at this level is being driven by two men, at 10*l.* per fathom. The cross-cut south at the 50, in the immediate end, by two men, at 6*l.* per fathom; the object of this cross-cut is to cut through the lode. The 40 cross-cut south is being driven by two men, at 6*l.* 10s. per fathom; this cross-cut has fully proved that a strong lode still stands to the south, which, so far as seen, contains ore more or less in sufficient quantity to save; we are not satisfied that we have fully driven through it yet, and are continuing the cross-cutting. No. 1 pitch over the 60 is being worked by two men, at 6*l.* per ton for lead. No. 2, by two men, at 5*l.* per ton. No. 3, by four men, at 5*l.* per ton. No. 4, by four men, at 6*l.* per ton. No. 5, by four men, at 6*l.* per ton. No. 7, by four men, at 4*l.* 10s. per ton. No. 2 pitch over the 50 end, at 4*l.* 10s. All the pitches have 15s. per ton for blende. Winzes have been put through from the 40 and 50 to the 60, which have thoroughly ventilated the two upper levels, and assisted the ventilation in the 60.

WEST CWMSTWITH.—John Davis, Oct. 12: The level west of winze has been extended about 5 fms.; the principal part of the lode here is standing on the north of the level, and we only put a shot here and there in it to prove the value as we go on. The parts of the lode we have taken down contains about 15 cwts. of lead ore per cubic fathom. After this level has been extended a few fathoms further we can put in another set of men to stope the ore ground down. There is no particular change in the cross-cut north. We have now two tribute pitches, one at the intermediate level and the other at the back of No. 2 east of winze; the ore at the latter pitch has much improved, and I think both parties are earning fair wages. At Penshafte we have opened out several fathoms of ore ground that could be worked away from the backs at a profit had we the facilities to do so, but at present we can not conveniently employed any more hands here hands here. The indications here are highly favourable, and, independent of the southern part of the sett, I consider that the company have here every encouragement to continue the development of the property. The rails and air-pipes are being removed from the unused part of the main adit to be fixed at the northern workings.

WEST GODOLPHIN.—John Pope, Oct. 12: Setting Report: Wilson's Lode: The 80, driving north, by eight men, at 7*l.* 10s. per fathom. We have driven 15 ft. through capels, mixed with patches of killas; for the whole of this distance it has been producing some very good stones of tin; the last 2 ft. driven through has been more defined, and yielding more tin, but I should think there is quite 6 ft. more to drive to get through the main tin-bearing part of the lode; as far as seen it is looking very kindly, and I think we shall find it to be a rich lode when it is cut through; it is letting out a very large stream of water, and has drained the 70 quite dry. In the 70 a winze to sink west, by six men, at 6*l.* per fathom; to be carried 7 ft. long and 4 ft. wide; this will be only a small portion of the width of the lode, but I am anxious to get a winze through to the 80 as early as possible for ventilation. The 70, driving west by six men, at 5*l.* 5s. per fathom; the lode is 4 ft. wide, worth 8*l.* per fathom for tin. There is more lode standing in the sides, which will be taken down as soon as we can hole No. 3 winze from the 60 to the 70. The 70, driving east, by six men, at 5*l.* per fathom; the lode is 4 ft. wide, wortk 5*l.* per fathom, producing tin and copper. The 70, No. 1 stope in back west, by six men, at 6*l.* per fathom; lode 10 ft. wide, worth 15*l.* per fathom for tin. The 60, No. 1 stope in bottom west, by six men, at 5*l.* per fathom; the lode is 8 ft. wide, worth 12*l.* per fathom for tin. The 60, No. 2 stope in the bottom west, by six men, at 4*l.* per fathom.; the lode is 7 ft. wide, worth 9*l.* per fathom for tin. The 60, No. 3 stope in bottom west, by six men, at 4*l.* per fathom; the lode is 8 ft. wide, worth 9*l.* per fathom for tin. The 60, No. 4 stope in bottom west, by six men, at 4*l.* 10s. per fathom; the lode is 8 ft. wide, worth 10*l.* per fathom for tin. The 60, No. 5 stope in bottom west, by six men, at 4*l.* per fathom; the lode is 6 ft. wide, worth 8*l.* per fathom for tin and copper. The 60, No. 6 stope in bottom west, by six men, at 8*l.* per fathom; the lode is 8 ft. wide, worth 12*l.* per fathom for tin. The 60, sinking winze west, by seven men, at 4*l.* per fathom, worth 6*l.* per fathom for tin. There is more lode standing in the sides, which will be taken down as soon as the winze is holed to the 70. The 60, No. 1 stope in back west, by four men, at 3*l.* 10s. per fathom; the lode is 3 ft. 6 in. wide, worth 7*l.* per fathom for tin. The 60, No. 1 stope in bottom east, by six men, at 2*l.* 15s. per fathom; the lode is 5 ft. wide, worth 6*l.* per fathom for tin and copper. The 60, No. 2 stope in bottom east, by six men, at 5*l.* per fathom; the lode is 10 ft. wide, worth 15*l.* per fathom for tin. One pitch on tribute in the bottom of the 60 north, on caunter lode, to two men, at 9s. in 1*l.*, at a standard of 28*l.* per ton for the tin. Our maeninery is all working very well. Wilson's engine working 4¼ strokes per minute. I hope to be able to report something very good at the 80 in the course of a few days.

WEST ROSKEAR.—H. Stephens, W. Bennetts, Oct. 17: Lanyon's shaft is suspended, being down to water, and these men are put to drive on the caunter at the 36. The 24, east and west of Stephen's shaft, are looking well, and judging from present appearances we think a very productive piece of mineral ground will speedily be laid open here. The lode in the 24, west of engine-shaft, contains a great quantity of mundic, intermixed with copper ore, and is daily improving in character. The engine lode at the 36 is made up of mundic, blende, and prian, a very promising lode, but not sufficient to value. The caunter at this level is only just out through. It is about 6 ft. wide, of great promise. We intend driving east on this, where we expect an improvement shortly.

WEST TANKERVILLE.—Arthur Waters, Oct. 17: The lode in the 86, south of shaft, is 6 ft. wide, worth 1¼ ton lead ore per fathom; this is a very fine-looking lode, and seems to be improving as we go southward. There is no change in the stopes this week.

WEST VOR.—S. Harris, Oct. 17: The shaft sinking below surface is down 15 fms. 2 ft.; lode in present bottom of shaft 2 ft. wide, of a kindly appearance. The rise above the adit level is up 4 fms. 2 ft.; the lode here is 18 in. wide, producing tinstuff. We are making fair progress in both points.

WEST WHEAL TOLGUS.—Oct. 16: In Taylor's shaft the ground is just the same as for some months past; the sinking last month was 8½ ft. There was very little hindrance for the month; we calculate on sinking about the same this month; the shaft is 8 fms. 4 ft. 6 in. below the 145. The lode in the 145 end west is very wide, with not more than from 1 to 1½ ton of ore per fathom. It is suspended, and the men are put to rise towards No. 3 winze under the 135, which we hope to communicate in about a fortnight, after which the rise men will resume driving the end again with eight men. No. 1 cross-cut, in this level, is being driven south by the side of the cross-course, for the purpose of cutting both parts of the lode; the first part is very near the south part, 6 or 8 ft. further south. We calculate on driving east through the cross course from the south part of the lode, which we think will intersect the north part, as the heave is about 8 ft.; if we meet with it orey, and we think there is a good chance of its being so, as there is a good lode south of the shaft in the level over, we shall continue to drive east on the lode. The lode in the end, east of No. 3 cross cut, will yield 3 tons, and west of No. 2 cross-cut 1 ton of ore per fathom; we hope to communicate these ends by the end of the month. The stopes in the back of this level are not yielding ore as in the 135; the lode is more dredgy, mixed up with hard killas. We thought to have been able to keep the horse standing in the side and back of the level, but it will not stand, consequently plenty of long timber has to be put in, which makes it costly and spare for rasing ore. The lode in No. 3 winze, below the 135, is falling off in value, now yielding 3 tons of ore per fathom. We expect to hole to the rise from the 145 in about a fortnight. We suppose we shall then put the same pare to sink No. 4 winze under the 135, which will then be in a fine course of ore; the lode in the end yielded from 10 to 12 tons of good ore per fathom. The lode in the 135 end west is 2 ft. wide, yielding 2 tons of ore per fm.; this end will, no doubt, go on improving. At Richards's shaft there is nothing requiring remark.

WHEAL COATES.—W. H. Martin, Oct. 17: In the bottom of the engine-shaft yesterday I ordered some holes to be blasted in the south side. We intersected a small branch containing a little tin. We are of opinion that in a few feet sinking we shall have a change. The lode in the winze sinking below the 70 is underlying south very fast; it maintains its value. The stope in bottom of the 70 east, on the north branch, is going down perpendicularly, and contains some splendid tin; this is the richest place we have. I saw the 70 west end charging last week; it is now altered from a red iron lode into a blue capel lode with blue peach; in some places it makes a good vein of tin. Taking the shaft, winze, and 70 west end, we are in a broken-up piece of lode, which will require a little perseverance to get through.

WHEAL UNY.—William Rich, M. Rogers, Oct. 14: The 160 end east carries stones of tin. The 160 end, west of incline-shaft, is in easy ground, and the lode is worth 10*l.* per fathom. The stope in the back of the 150 west is worth 10*l.* per fathom The 150 end, east of King's, is worth 7*l.* per fathom. The 140 east is without alteration to notice. The stope in the back of the 60, west of incline shaft, is worth 8*l.* per fathom. The stopes east of King's shaft, are not so good as formerly, but in the western part of the mine the lode has improved considerably.

WHEAL CREBOR.—John Andrews, Oct. 15: The lode in the 120 end east is 2 ft. wide, worth 5*l.* per fathom. The two stopes in the back of the 120 are worth 6*l.* per fathom each. All other points are without change.

SALES OF COPPER ORES.

COPPER ORES SOLD AT THE CORNWALL TICKETINGS, FOR THE QUARTER ENDING SEPTEMBER 30, 1878.

Mine.	Tons.	Amount.
South Caradon	1400	£7,156 0 0
West Tolgus	872	5,014 2 6
Mellanear	1501	4,607 14 0
Devon Great Consols	2313	4,417 7 6
Marke Valley	971	3,224 10 6
Gunnislake (Clitters)	620	2,368 5 6
Glasgow Caradon	605	2,357 19 0
East Pool	781	1,943 2 0
West Seton	445	1,720 14 6
Levant	222	1,676 6 9
Hingston Down	337	613 0 0
Bedford United	177	568 16 6
South Crofty	173	477 12 0
Phœnix	95	462 17 0
West Godolphin	98	393 3 0
Gawton	160	301 17 6
Carn Brea	112	287 11 6
Wheal Crebor	105	260 12 6
Wheal Owles	81	205 0 0
Wheal Basset	28	186 18 0
New Cook's Kitchen	20	139 10 0
Wheal Comford	32	124 16 0
North Busy	33	123 15 0
South Condurrow	20	122 10 0
East Caradon	25	111 17 6
Wheal Kitty	16	78 0 0
West Basset	26	70 17 0
North Treskerby	20	58 10 0
South Roskear	13	45 16 6
Harvey's Ore	41	38 19 0
Rule and Williams's Precipitate	2	31 1 0
Killifreth	10	30 10 0
Dolcoath	13	26 6 6
Wheal Russell	22	24 4 0
Penberthy's Ore	7	21 3 6
Trumpet Consols	1	20 1 0
Bawden's Ore	37	18 10 0
Poldice	6	15 18 0
Wellington's Ore	2	11 17 0
Penstruthal	9	10 7 0
Dingle's Ore	24	9 12 0
West Maria and Fortescue	18	9 0 0

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Purchasers.	Tons.	Amount.
Vivian and Sons	2616	£10,008 16 0
P. Grenfell and Sons	1506	6,221 17 3
Nevill, Druce, and Co.	2726	7,110 8 6
Williams, Foster, and Co.	2952	11,263 6 6
Mason and Elkington	1459	4,107 19 6
Charles Lambert and Co.	204	685 3 9
Total	11,463	£39,397 11 6

COPPER ORES SOLD AT THE SWANSEA TICKETINGS, FOR THE QUARTER ENDING SEPTEMBER 30, 1878.

Mines.	Tons.	Amount.
BRITISH.		
Berehaven	783	£ 4,580 7 6
Knockmahon	210	887 1 0
Tan y-Bwlch	112	862 10 6
Tigrony	17	260 19 0
Bampfylde	32	197 12 0
Cronebane	5	183 10 0
Total	1159	£ 6,972 0 0
COLONIAL.		
Union	1714	£ 9,972 14 6
Emily	16	258 0 0
Total	1730	£10,230 14 6
FOREIGN.		
Spanish	2972	£ 7,623 6 6
Caveira	1973	4,626 17 0
Bogalho	92	1,446 14 0
Virneberg	129	1,183 6 6
Almodovar	109	854 16 0
Aljustrel	202	429 4 0
Telhadella	50	323 15 0
Negrillo	59	85 11 0
Total	5586	£16,573 10 0
RECAPITULATION.		
British	1159	£ 6,972 0 0
Colonial	1730	10,230 14 6
Foreign	5586	16,573 10 0
Sundries	125	1,390 1 0
Total	8600	£35,166 5 6

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Purchasers.	Tons.	Amount.
Copper Miners Company	992	£ 3,662 6 3
P. Grenfell and Sons	885	3,021 8 6
Nevill, Druce, and Co.	684	3,528 6 8
Vivian and Sons	750	3,321 6 6
Williams, Foster, and Co.	2599	9,884 10 5
Mason and Elkington	557	1,616 4 0
Charles Lambert and Co.	481	3,431 17 2
Sweetland, Tuttle, and Co.	952	2,184 16 0
Landore Copper Company	700	4,515 10 0
Total	8600	£35,166 5 6

CHEMICALS, MINERALS, AND METALS.—Messrs. J. Berger Spence and Co. (Oct. 12)—Alum: Loose lump, 6*l.* 7s. 6d. to 6*l.* 10s.; ground, 7*l.* 5s.—Arsenic: Best white powdered, 8*l.* 10s.—Borax: Refined, English, 36*l.*—Copperas: Green, 52s. 6d.; white, 8*l.* 7s. 6d.—Copper: Sulphate, 19*l.*—Nitrate of Lead, 31*l.* 15s.—Saltpetre: Refined English, 27*l.* 10s.—Sulphate of Zinc, 12*l.* 12s. 6d.—Sulphur: Roll, 8*l.* 10s.; flowers, 10*l.* 10s.—Tin crystals, 6½d. per lb.—White Lead, 21*l.* 5s.—Barytes: Carbonate, 100s.—Brimstone: Best thirds, 8*l.* 10s.—China-Clay, 38s.—Oxide of Zinc, 22*l.* 10s.—Talc, 8*l.*—Umber, 70s.—Charcoal: Best stick, 4½d. per bushel; field burnt, 6d.—Globe Steam-Boiler Powder, 20s. per cwt.—Naphtha, 60 per cent., 3s. 6d.

HOLLOWAY'S PILLS are the medicine most in repute for curing the multifarious maladies which beset mankind when dry summer weather gradually gives place to cooler autumnal days. In fact, these pills offer relief even if they fail of proving an absolute remedy in all the disturbances of digestion, circulation, and nervous tone which occasionally oppress a vast portion of the population. Under the genial, purifying, and strengthening powers exerted by this excellent medicine the tongue becomes clean, the appetite improves, digestion is quickened and assimilation is rendered perfect. These pills possess the highly estimable property of cleansing the entire mass of blood, which, in its renovated condition, carries purity, strength, and vigour to every tissue of the body.

TO THE METAL TRADE.

FOR COPPER, TIN, LEAD, &c., apply to—
MESSRS. PELLY, BOYLE, AND CO.,
SWORN METAL BROKERS,
ALLHALLOWS CHAMBERS, LOMBARD STREET, LONDON.
(ESTABLISHED 1849.)

The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, OCT. 18, 1878.

IRON.	£ s. d.	£ s. d.
Pig, GMB, f.o.b., Clyde..	2 3 9-	—
,, Scotch, all No. 1 ...	2 5 6-	3 10 0
Bars, Welsh, f.o.b. Wales	5 0 0-	—
,, ,, in London.	5 12 6-	5 15 0
,, Stafford., ,, .	6 10 0-	7 10 0
,, in Tyne or Tees ...	5 5 0-	5 10 0
,, Swedish, London..	8 17 6-	9 10 0
Rails, Welsh, at works..	4 15 0-	—
Sheets, Staff., in London	8 5 0-	—
Plates, ship., in London	6 15 0-	—
Hoops, Staff.	7 5 0-	7 10 0
Nail rods, Staff. in Lon.	6 0 0-	6 15 0
STEEL.		
English, spring 13	10 0-19	0 0
,, cast 30	0 0-40	0 0
Swedish, keg.....14	0 0-	—
,, fag. ham. 15	0 0-	—
LEAD.		
English, pig, common...15	10 0-	—
,, ,, L.B.....15	15 0-	—
,, ,, W.B. 16	10 0-	—
,, sheet and bar..16	15 0-	—
,, pipe 17	0 0-	—
,, red 19	0 0-	—
,, white 24	0 0-26	0 0
,, patent shot ...19	15 0-20	0 0
Spanish 15	2 6 15	5 0
NICKEL.		
Metal, per cwt 18	0 0-20	0 0
Ore, 10 per cent. per ton.24	0 0-26	0 0
QUICKSILVER.		
Flasks of 75 lbs., ware..	6 15 0-	—
SPELTER.		
Silesian..... .. 17	2 6- 17	5 0
English, Swansea 17	10 0- 17	15 0
Sheet zinc 21	10 0- 22	0 0

TIN.	£ s. d.	£ s. d.
English, ingot, f.o.b...	60 10 0-	61 0 0
,, bars ,, ...	61 10 0-	62 0 0
,, refined.....	62 10 0-	63 0 0
Australian	56 0 0-	—
Banca	58 0 0-	(nom.)
Straits	56 0 0-	—
COPPER,		
Tough cake and ingot.	64 10 0-	65 0 0
Best selected	65 10 0-	67 0 0
Sheets and sheathing.	68 10 0-	69 0 0
Flat Bottoms	72 0 0-	—
Wallaroo	68 10 0-	(nom.)
Burra, or P.C.O.	67 0 0-	,,
Other brands	64 0 0-	65 0 0
Chili bars, g.o.b.....	57 10 0-	—
PHOSPHOR BRONZE.		
Bearing metal	£105	0 0
Other alloys	£110 0 0-	125 0 0
BRASS.		
Wire	7½d.-	8d.
Tubes.....	7½	—
Sheets	8¼	- 8¾
Yel. met. sheath. & sheets.	5¼	- 6¼
Nails composition.....	8	- 9

TIN-PLATES.*	per box.	
Charcoal, 1st quality ...	1 0 0-	1 2 0
,, 2nd quality ...	0 19 0-	1 0 0
Coke, 1st quality	0 16 0-	—
,, 2nd quality	0 14 0-	0 16 0
Black .....per ton	16 0 0-	16 10 0
Canada, Staff. or Gla., at Liverpool	11 0 0-	12 0 0
Black Taggers, 450 of 14 × 10	30 0 0-	—

* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; IX 6s. per box more than IC quoted above, and add 6s. for each X. Terne-plates 2s. per box below tin-plates of similar brands.

REMARKS.—Throughout the past week our markets have remained in a disturbed and unsatisfactory state, owing to the numerous failures and the advance in the Bank rate. It is thought by some that the present feeling of distrust will lead to greater stringency in monetary affairs, and that it will bring about further suspensions and defalcations. There is no doubt that a considerable amount of inconvenience and pressure is already experienced in certain weak quarters, and that any further curtailment of accommodation would soon effect the overthrow of houses of small and doubtful means. At a time like the present people can only go for accommodation where they are well known, and if they do not happen to be held in high estimation they are not likely to meet with a very cordial reception. There is little to be done in the shape of new business yet awhile, buyers being particularly shy, as they cannot calculate to what extent the markets may be affected, and therefore they will not commit themselves to any extensive transactions whatever. Every one feels that his safety depends upon reducing liabilities, and not entering into any fresh contracts where the slightest risk is incurred. Financers are now becoming scrupulous about their securities, and ask for a good margin, and it will probably be found more prudent and pleasant not to be under the necessity of borrowing. The most comfortable and by far the best position to occupy is to keep a good cash balance at the bankers, and be prepared for all emergencies. All paper business should be consigned to the waste paper basket, and every transaction should be for prompt cash only. Credit has been too extensively given and indulged in, and has resulted in unsound and reckless trading. It is better to be content with a small cash business than to be over head and ears in debt. Out of debt is to be out of danger, and therefore to be in debt not unfrequently leads to trouble; and it would almost seem, from the enormous liabilities of insolvent firms, that they rather seek trouble, and certainly do not hesitate about bringing trouble upon others.

The general appearance of commercial affairs just now is undoubtedly gloomy, and it is but natural that it should exercise a depressing effect, but it concerns us to enquire into the nature of the disturbing element, and to ascertain, if possible, how far future business may be influenced. The importance of the subject will not be disputed, and therefore it is deserving of careful and thoughtful consideration. First of all, then, we would refer to political affairs, and see whether there is anything in them to create alarm and apprehension, but we think we need scarcely dwell upon them, for although the horizon is not perfectly free from all dark spots, yet nothing particularly serious appears to be pending to disturb the regular course of our markets, as it is chiefly owing to the difficulties and troubles in commercial and banking circles that business is so stagnant and prices so depreciated. The banks have foolishly afforded assistance beyond safe and proper limits, and given facilities which ought never to have been granted, upholding houses without capital, and encouraging them to carry on a reckless business, to the injury of all legitimate traders, and the continuous decline in the value of produce has at last brought the whole thing to light, and those who have been upheld by this sort of artifice must now go to the wall, and probably they will bring down some few innocent people with them, but the course once again cleared of these reckless and mischievous traders may enable the respectable and honest merchant to make a reasonable profit upon his merchandise. There has been no general over-trading, and as soon as ever the realisations of the bankrupt stocks and shipments are completed it will make it better for those remaining, and some lasting improvement may then be looked for. We have been marvellously free from scheming and swindling companies, and there are no calls to be met upon fraudulent foreign Government loans. There is greater economy observed in all branches of trade, and goods can now be manufactured much cheaper than before. The inducements to trade will greatly improve, for with cheap prices and diminished illegitimate competition merchants and dealers will gather strength and confidence. The high rate of money will probably give way to easier rates as soon as the crisis is over, and then there will be a general expectation of good times, and we feel thoroughly convinced that the cheap prices will attract a large number of speculator and investors to our markets, and therefore it behoves consumers to be on the alert, and to get well into stock beforehand. They are scarcely likely to have a better chance of doing so than now, and any delay may jeopardise one of the best chances that ever presented itself in the whole course of their life.

COPPER.—An easier market has prevailed for most descriptions of this metal, and the market at the moment is decidedly against those holders who are forced to realised. Our repeated warning to holders of what possibly might happen in the event of a collapse were too much disregarded, and the consequence is that several small and weak firms severely suffer, but to those houses who are strong enough to weather the storms it is almost immaterial what figure prices may temporarily decline to. There is no fear of the ultimate issue, and prospects are not so bad as many would paint them. The general quotations ruling in our market are panic prices, they are not prices to sell at, and are only taken by those who cannot help themselves. Some may have received advances and are unable to comply with the further demands made upon them for increased margins; such must succumb, they have no alternative, and, of course, buyers will only take such parcels of copper over at a considerable concession upon its legitimate value. Dealers, perhaps, hold enough; at any rate, they do not care to overburden themselves under such circumstances, and copper that must be sold must consequently be sacrificed. The cessation in the demand will have to be made up hereafter, and in proportion as it decreases so it will increase, for the percentage of wear and tear is not less than it was formerly, and whereas the production is said to be falling off, the consumption on the other hand is annually increasing. There is really not the slightest occasion for holders to take fright because one or two rotten banks and houses have failed. The markets will be less liable to disturbance and depreciation in the future, and we should strongly advise all who can to hold to their copper, and those who have none to pick up the bargains whenever obtainable. Consumers possess a most unusual advantage, and should not throw their opportunity away; they need not point to future stocks, and think on that account the prices will recede, for we must get accustomed to bigger figures than formerly. England is becoming more and more the storehouse of the world for financial reasons, and there is no doubt that in future stocks here will be kept up much larger than in past years. The imports and exports from January to September compare favourably with those of last year, and, according to the Board of Trade Returns, are as follows:—Imports 67,009 tons this year, against 68,119 tons in 1877, or a diminution of 1110 tons; whereas the exports have greatly increased, there being 43,766 tons this year, against 39,718 tons last year, or an increase of 4048 tons. The charters from Chili have been telegraphed for the first half of September as 1200 tons only, consisting of 700 tons bars and 400 tons ore and regulus, and 100 tons of bars for the Continent. The price of Chili bars about this time last year was 66*l.* to 67*l.*; it is now at the unprecedented low figure of 57*l.* 10s for g.o.b's. The Indian houses have been buying very little lately, and the continuous fall in the exchange prevents their paying smelters' rates; the advices are by no means encouraging, and our market will probably not derive much support yet awhile from that quarter of the world.

The cheap parcels of copper are falling into stronger hands, but buyers will only take them over at a concession upon the previous price, at the same time they are readily absorbed in this way, and so long as there is an outlet by merely dropping 5s. per ton, dealers and speculators are not likely to be in a fix with regard to finance. Of course it is a matter for consideration as prompts fall due whether it is better to drop a little in the price and get entirely quit of the copper, or pay 1 per cent. above Bank rate for an advance. The position of holders varies materially, and the policy of holding or selling must be decided according to their respective means. The holder who has his own money invested in copper would laugh at the idea of accepting present prices, but where borrowed capital has to be employed for the purpose of holding stock the state of affairs is altogether altered. While dear money lasts and failures take place an uneasy feeling will continue, and the course of the market may incline downwards, but that will only arise from the weakness and influence of the times, and not from any special cause of depreciation in this particular metal. All markets just now are more or less affected, but there is no reason to suppose that copper will not recover with a general revival in trade; in fact, we further anticipate and are perfectly sanguine that it will be one of the first commodities to experience an improvement. Sales which are now being made of Chili bars are clearly a dead loss to the seller, and there must be a great amount of reluctance to part with the copper at such ridiculously low prices, especially when it cannot be replaced at the same price; but then what is a man to do if he exceeded the bounds of discretion, and committed himself to contracts he cannot perform without making the loss? It is evident the loss must be borne for a time, and hopes are often entertained that the next seller will be obliged to sell cheaper, so as to afford him the opportunity to recoup the loss he sustained; but there comes an end to the realisation of weak lots, and as soon as ever they cease up will go the market. Hitherto everything has found buyers, presently everything will favour sellers; the rubbish stock will be sold, the houses of straw will be swept away, money will be getting easier instead of dearer, trade will be increasing in place of decreasing, depression will be succeeded by animation, the favourable will be substituted for the unfavourable, the active for the inactive, advancing quotations for falling prices—all buyers and no sellers. Already there is at least half the community who believe that the worst stage has been reached, and it is said that many bankers and merchants entertain this opinion. We only hope that if there are any more firms irretrievably involved they will at once be declared, for the sooner we learn the extent of the evil the better. The consequences may be serious, but if they are known it is half the battle, for steps can then be taken to repair the mischief; but we trust that the caution which has been exercised will save other houses from becoming involved, and that no further failures of any amount will be announced. In that case there will be little to fear from increased depreciation in the value of this metal, but on the contrary, sellers may safely look forward to brighter days, when they will all recover their former losses, but be enabled to realise reasonable profits.

IRON.—There is not the least improvement in this metal, and prices still assume a downward tendency. As regards the iron rail orders, there is no prospect of an increased demand, and the probability is that there will be less doing in them in future. The prices of steel rails are now so low—5*l.* to 5*l.* 2s. 6d.—that only for very special purpose will iron rails be used, and it is not unlikely that we may hereafter see iron rails dearer than steel rails. Welsh bars are very dull of sale, and lower prices will have to be taken before any increased amount of business can be secured. Staffordshire iron has not varied materially, but unmarked iron is selling considerably cheaper than the list houses. A fair quality of hoops can be bought at 7*l.* in London; Swedes bars, 3 by ⅝, are obtained at 8*l.* 15s.; Indian specifications 5s. to 10s. dearer, according to the number of extras. The accounts from the Welsh district are unsatisfactory, and the masters experience a difficulty in providing sufficient work to keep the mills in operation. The reports from the East and the North are as bad as those from the West, the South, and the Midland Counties. Middlesborough iron is again weaker, and further concessions have to be submitted to in order to obtain business; the markets are remarkably quiet, and there is no disposition to operate: 37s. 6d. is quoted for No. 3. It is feared that the reduced price of Scotch will interfere with future shipments to Grangemouth. The Cleveland ironmasters and mineowners have applied to the North-Eastern Railway Company for a reduction in the carriage rates for minerals. The advices from Sheffield are no better, and general stagnation still prevail in thet district. Steel rails are about the only articles in fair request; the engineering trades are inactive. In Scotch iron there has been a further fall, and 42s. 10½d. accepted for m.n. Notices have been issued that the Clyde shipbuilders and engineers will make a reduction on the 21st in wages of 7½ per cent. It is not expected that any opposition will be offered by the men.

SHIPMENTS.

For the week ending Oct. 12, 1878..... Tons	10,362
For the week ending Oct. 13, 1877.....	9,455
Increase	907
Total decrease for 1878	54,029
Imports of Middlesborough pig-iron into Grangemouth:—	
For the week ending Oct. 13, 1877 ..... Tons	6,230
For the week ending Oct. 12, 1878.....	5,648
Decrease	582
Total increase for 1878	1,242

FURNACES.

In blast Oct. 13, 1877.....	87
In blast Oct. 12, 1878.....	93

We observe that it is stated that an application has been made by the British Iron Trade Association to the Minister of Finance at Brussels asking for the repeal of the duty of 2½d. per cwt. now levied on pig iron imported into that country from Great Britain. The reasons assigned are that a remission of the duty would be of greater advantage to the Belgians than its retention, and it would be certain they say to increase trade between England and Belgium, by enabling Belgian ironmasters and others to purchase their crude iron more advantageously. It is also said that it would benefit Belgium by affording employment to a large number of hands in the Belgian mills occupied in converting the crude iron into manufactured. Such a request from an iron trade association in England sounds strange. In the first place, it is doubtful whether the Belgian houses would reap any particular advantage, for if the duty were repealed it might cause an increased demand for pigs, and, secondly, the price would immediately advance, therefore what they saved in duty might be more than paid away in the price: but why should ever such a petition be presented by Englishmen when they see that the depression in the manufactured trade of this country in a great measure arises from the excessive competition from Belgium? It would seem that the applicants could have no interest or regard for the English mills, for they are doing their utmost to increase the competition by supplying the raw material cheaper to the foreign mills. The parties would be representatives of the pig branch only, but supposing they are successful, they would not reap much, if any, benefit by it, for what they might gain in export orders would probably be lost to them in home consumption; but however one part of the trade can act so diametrically opposite to the interest of the other is most extraordinary, and deserving of the greatest reprehension. Instead of trying to obtain increased competition we ought to do our utmost to defeat it, and when we can supply our manufactured iron as cheaply as Belgium it will be quite time enough then to sue for increasing facilities in behalf of the Belgian mills, but in the meantime let us afford every protection in our power to our own countrymen; and if Belgium can convert our pigs into manufactured cheaper than we can, it becomes a question for grave consideration whether instead of seeking for a reduction of duties in Belgium we ought not to put on an export duty from England at such an amount as will bring the price of Belgian manufactured on a par with English manufactured.

Mr. Chamberlain's award reducing puddlers wages 6d. per ton is commendable inasmuch as it is a move in the right direction. The only thing to be feared is that the reduction will not prove sufficient. No doubt Mr. Chamberlain was loth to decide against the men, and gave his award with a great amount of reluctance, for no one possessed of any feeling would wish to cut down the poor men in their wages below their present miserable pay unless absolutely necessary, although they would not work when they could have had it, and now they want it they cannot get it, and they are now being punished for their past sins, but this is one of those periods which compels the strictest economy to be exercised in the manufacture of iron, and as the current prices fail to stimulate business, or even to retain orders for execution in this country, it is very certain that Mr. Chamberlain, as president of the South Staffordshire Iron Trade Wages board, could not reasonably have arrived at any other conclusion; besides he doubtless considered that a reduction would hereafter tell in favour of the men, seeing that foreign houses were and still are absorbing what little trade can be secured, and that the only chance of any employment remaining for the men would be by lessening the cost of manufacture, and thus enable masters to make further concessions to buyers, and bring their quotations more on a par with those of Belgium. The reduction, although trifling, will be severely felt by many of the men and their families, because their time is not half employed, but they must bear in mind that they are not the only sufferers, as every one in connection with the trade is suffering in one way or another. Mr. Chamberlain has perhaps an antipathy to great changes, and prefers to act with moderation, and do things gradually, and this principle has probably influenced him in making so slight a reduction, but although it may have an appearance of letting the men down by easy stages, and affording them time to effect retrenchment, yet we question the advisability of adopting this course under existing circumstances, and we doubt whether it will really prove so beneficial as a substantial drop would have done with a distinct understanding that the masters should proportionately reduce quotations.

The difference saved in the wages will, according to the declaration of the masters, go into their pockets—that is to say, they publicly announce that they have no intention of lowering prices or giving buyers any greater benefit in the shape of reductions; consequently, if they adhere to this resolution the men are not likely to derive much advantage in the way of increased work, and will stand at a positive disadvantage in respect to the rate of wages. The announcement made by the masters is exceedingly inopportune, whether they intend to carry it out or not, for it can have no other effect than to irritate the men and to make them dissatisfied with Mr. Chamberlain's award. To say the least, it is a foolish thing on the part of the masters to make it appear that they are about to be benefited at the expense of the poor men. We cannot wonder at their looking upon the demand as an exaction, and consider that the masters are taking a mean advantage of them on account of the dulness of trade. There may be some of the list houses, and others who make special qualities, who cannot obtain full prices, but the great majority of the ironmasters will have to reduce their prices, and, therefore, it may be treated as only a little bit of brag; that they will not make any alterations, and it has, probably, only been done just to see whether any buyers will be caught with it; but, judging from the disposition of buyers, they will only buy at cheaper rates, and sellers will have to give way once more to secure business.

Several of the mills are stated to have been working at a loss for some time past, and there exists too good reasons for believing this to be the case, and the masters may have done so in full expectation that wages would come down, and that they will then be enabled to recover some of their previous loss. All this may be very correct, and we will not so much as question it for one moment, for circumstances tend to confirm it; but the men seem to be impressed with a different belief, and do not think that that their masters would go to such lengths in anticipation of coming events; and the masters have evidently injured their own cause in the present instance by making such an unadvisable and objectionable avowal so immediately after Mr. Chamberlain's award It was not only impolitic but rather unkind, for as both parties have agreed to abide by Mr. Chamberlain's decisions, it looks as if the masters chuckled over the extra pressure brought to bear upon the men. Now, this is what ought to be avoided and prevented for the future. The interests are identical, and therefore they—masters and men—should work in harmony with one another. We have repeatedly urged that whenever concessions are necessary one and all should contribute their fair share, and then there would be an end to disputes and bad feeling. If the terms and conditions under which one district worked were not suitable for those of others then separate arrangements could be made and agreed upon; but the principle of mutual concessions and benefits should be strictly adhered to; but as long as the large landed proprietors and owners of mine property and landlords hold aloof and decline to forego any of their share of profit then the poor ironmasters and men will have to bear the whole burden upon their own shoulders, until the ruinous and oppressive laws of the country are altered to meet the fluctuations of trade.

TIN.—The price of English has been reduced to 59*l.* for ingots, blocks, &c., and 50*l.* for bars, and the price of foreign at one time was knocked down as low as 52*l.* 15s., but since then the market has rallied, and 56*l.* 10s. cash has been paid for Australian. The present price is still absurdly low, and we should not be surprised at a rush being made upon the market to secure everything that is offering at anything approaching the present figure. Consumption continues satisfactory, and the deliveries for the first half of the month, as far as can be ascertained, will show a very good return if they continue on the same ratio to the end of the month. The telegraphic advices from Australia show that the shipments for last month were over-estimated, there being only 600 tons instead of 800 tons. It will be remembered that a slight diminution in the statistics took place during the month of September, and now it is ascertained that the actual shipments from Australia are less than they were estimated, and that deliveries from stock here so far are proceeding favourably, there is a fair prospect of higher prices. The market may remain sensitive, but if the favourable features above mentioned are confirmed and improved upon the prices will not stay long where they now are, and consumers cannot be too quick in securing their requirements. The present prices are exceptional, and leave a loss to importers and dealers, and many of them feel that it would be better to trust to the chapter of accidents than to accept such miserable and ruinous prices. Suppose the shipments from Australia were to continue light, our stock would vanish in an incredibly short space of time, and since Tasmania has poured in her supplies so freely we are now in a great measure depending upon their continuance, but if they fell off even temporarily it would at once make a great impression upon the price, and although we have got in the way of calculating regular heavy shipments, and do not anticipate from any accounts that are to hand of any material difference in supplies, yet it might occur. Mount Bischoff last year ran short of water, and supplies were in consequence delayed, and what happened last summer might also occur again in the ensuing summer. Their dry season will, therefore, soon commence, and may even prove a drier season than the previous one. There might be a complete drought, for droughts in Australia are frequent occurrences, and the supplies might not merely be partially but altogether stopped. We do not say it would be well to reckon upon such an event; at the same time it is a possibility, and one of those things which might happen. Then, again, it is reported that there exists an inexhaustible quantity of tin, but time may prove that the inexhaustible quantity is all a myth.

The term inexhaustible seems to be very often misapplied. It has been so with regard to mining property before to-day, and if we are not very much mistaken we think we once heard of a very celebrated lead mine in Derbyshire which was discovered to be so rich and pure in metal that the whole world could be supplied from it for a mere song, but after a little time it turned out that the men had fallen upon what they term a spoon, and the whole thing soon ended, and those who had heavily invested in the mine felt what spoonies they were to have been led away by a spoon. The Chineba Islands off the west coast of South America were said to contain an exhaustible supply of guano, but after a few years working the inexhaustible was declared exhaustible, and the bondholders quaked for their money. The inexhaustible riches of Peru, like most other mundane things, came to an end, and it is now a beggarly and dishonoured State. Many revolutions in trade at various times have been prophesied as certain upon fresh discoveries of what appeared inexhaustible sources of wealth, and the colossal fortune so near within reach has often proved a sad and fatal misfortune, as many of the present generation know to their cost. Even England's last inexhaustible treasure in the acquisition of the Island of Cyprus has proved a delusion, and found to be an empty and barren land. We do not say that supplies of tin are likely to suddenly cease from Australia, but we do maintain that the accounts received up to the present time are too conflicting to be reliable, and, therefore, all that can be done is to narrowly watch and closely follow the latest and best information. The inducement to press forward supplies at the reduced price is considerably diminished as the accounts will show a very different result to what was formerly realised, and on that account alone the shipments may be reduced. It is one of the standard laws of trade that as prices decline supplies fall off and consumption increases. Of the latter in this particular case ample proof exists, and if September shipments are to be considered as a criterion of the future supplies from Australia there will be no occasion to remain uneasy about the inexhaustible and overwhelming inundations that have been talked of and predicted as frequently. Men are more often scared by the terror of their imagination than by realities.

The reduction in value will, undoubtedly, effect a healthy change in the market and there is now less fear of excessive supplies. Production was stimulated, and shipments pushed forward to secure the high prices, and the capabilities of the colonists have been fairly tested, and can be pretty well estimated by the figures of the last twelve months. Upon the score of prudence, experience, and judgment no business man would continue to overload a market and thereby depreciate the value of his own goods. We must give the Australians credit for possessing common sense, and exercising it at the fit and proper time. They can see as plainly as we can that to obtain high prices it will be necessary to moderate supplies, and there is no question but what they will do so, at least until trade revives, and the demand is equal to larger supplies. Why should the trade look with astonishment at a sudden rally in price, which is most natural after a serious fall, especially when that fall occurred on a fallen market, and with reducing stocks, and amended statistics, which ought and would have caused an enhanced value if it had not been for the fright in the City, all about a few rotten and dilapidated firms? If anyone wants to buy tin he must be quick, and lose no time about it, but be as swift as the ostrich.

QUICKSILVER, in sympathy with the general state of trade, was very little in demand during the early part of the week, and on Thursday the importers accepted 6*l.* 15s. for some quantity, which is the closing price. California remains relatively dearer.

THE IRON TRADE.—(Griffiths's Weekly Report).—Friday evening. The Glasgow market opened this morning flat, with business at 43s. 8d. to 43s. 9d. cash. This afternoon's market was rather firmer, closing quiet, with sellers at 44s, buyers a shade less. This is 2d. lower than the price last Friday, when warrants closed with sellers at 44s. 2d. We quote makers' No. 1 iron:—Gartsherrie, 52s. 6d.; Coltness, 54s. 6d.; Calder, 53s. 6d.; Langloan, 54s. 6d.; Summerlee, 52s.; Monkland, 46s. 6d. f.o.b. Glasgow; Glengarnock, 50s. 6d.; Eglington, 46s. f.o.b. Ardrossan; Shotts, 55s., f.o.b. Leith. The merchants gave out all pressing orders at the Birmingham Quarter-day. On this account we have had a remarkably quiet week on our market. In foreign iron a large business has been done. To our knowledge the agent of a Belgian works has placed 1250 tons, and Westphalian wire rods are selling constantly. The dimensions of this trade are considerably increased, and the wire is itself being imported largely from this country. We have nothing new to report from the iron districts, except general weakness in prices. The Glasgow market is nervous, and a little irregular, and Middlesborough pigs are lower. Manufactured iron is unchanged in price, and second-class bars on the Birmingham Exchange yesterday were very firm, for the simple reason that the makers cannot sell them for less money. The present abnormal state of the money market checks business, and prevents merchants from moving in large operations. Efforts have been made this week to raise the price of tin, which has been done at 56*l.* spot for foreign, but the difference to-day is very wide, and legitimate business at a standstill. All other metals are weak, and the markets are nervous, with very cautious buyers all round. Tin-plates are better, and slightly improved prices are being obtained for cokes and charcoals.

Messrs. HARRINGTON, HORAN, and Co. (Liverpool).—Arrivals here during the fortnight of West Coast, S.A., produce:—Vigil, from Valparaiso, 280 tons regulus, 480 tons bars; Jessica, from Valparaiso, 280 tons bars; Patagonia, from Valparaiso, 535 tons bars, 100 tons ingots. At Swansea, Atlantic, from Pena Blanca, 745 tons regulus. Stocks of copper (Chilian and Bolivian) in first and second hands likely to be available, we estimate at—

	Ores.	Regulus.	Bars.	Ingots.	Barilla.
Liverpool	—	1197	17,454	—	—
Swansea	2082	6540	1,923	—	—
Total.....	2082	7737	19,377	—	—

Representing about 23,275 tons fine copper, against 22,658 tons Sept. 30; 17,998 tons Oct. 15, 1877; 14,546 tons Oct. 15, 1876; 12,510 tons Oct. 15, 1875. Stock of Chili copper in Havre, 7102 tons fine, against 7985 tons Oct. 15, 1877; stock of Coro Coro barilla in Havre, 2994 tons fine, against 630 tons Oct. 15, 1877; stock of Chili copper afloat and chartered for to date, 13,000 tons fine, against 6800 tons Oct. 15, 1877; stock of foreign copper in London, chiefly Australian, 6865 tons fine against 4522 tons Oct. 15, 1877.

According to the Board of Trade Returns, the total imports and exports into and from this country for the first nine months of the following years were—

	1876.	1877.	1878.
IMPORTS—Copper in ores .....Tons	8,325	12,318	10,114
Ditto, regulus	10,269	11,622	14,997
Ditto, bars, cakes, and ingots.....	29,330	30,590	30,692
In pyrites (estimated)	10,654	13,662	11,206
Total imports	58,578	68,119	67,009
EXPORTS—English, wrought & unwrought.	16,836	16,106	23,118
Foreign copper, unwrought.....	12,774	10,631	9,440
Yellow metal.....	9,205	12,981	11,208
Total exports.....	38,815	39,718	43,766

The settlement of the fortnightly account in the MINING SHARE MARKET has occupied the chief attention of the dealers this week; and as general business has been particularly dull and depressed, our quotations, as usual, are for the most part merely nominal. Late last week the smelters put down the standard for tin one 2*l.* per ton, and this added to the general depression which then prevailed. After each successive fall during the past 12 months the miners have flattered themselves that tin had then reached its lowest point, but there seems constantly to be a "lower depth" in store for them beyond all their hopes and calculations, and this last drop in ore is the more unaccountable if, as we are informed, tin is firmer, and has, in fact, advanced in price this week.

TIN MINES, as may be expected, are almost unsaleable, and the nominal quotations are lower. At Wheal Basset meeting the accounts showed a loss on three months working of 897*l.*, and a balance against the mine of 7278*l.*, a call of 5*l.* per share (2560*l.*) was made. The tin sold, 56 tons, realised 1812*l.* The report states that the mine has greatly improved for tin within the past few years, but although there are some thousands of fathoms of ground that would leave a profit at a moderate price only for tin, at the present low price it will not pay, and the agents recommend its temporary suspension. Carn Brea, 30 to 35; Dolcoath, 22 to 24; Penstruthal, 3s. to 4s.; South Condurrow, 10 to 10½; South Frances, 4¾ to 5; Tincroft, 6 to 7; Wheal Agar, 3½ to 4; Wheal Grenville, 1¼ to 2; Wheal Peevor, 6 to 6½. At Phœnix and West Phœnix meeting a call of 3s. (1800*l.*) was made. The accounts, which are only charged up to May, showed a loss on four months' working of 1881*l.*, after

crediting tin unsold 3630*l.* The debit balance is given as 3541*l.*, but as the costs for four months to May are given as 9120*l.*, there must be a heavy liability from May to October.

Copper Mines.—There is very little doing in copper mines. The standard for ore declined 2*l.* 10s. at the Ticketing on Thursday, when the average price of ore was 3*l.* 4s. 6d. per ton. Devon Great Consols, 1¼ to 1⅜; the ore here (652 tons) realised 1253*l.* for the month. Morfa Du, ⅜ to ½; the lode is worth 7 tons per fathom. The winze will be holed to the bottom level this week, and good stoping ground opened. Parys Mountain, 4s. to 6s.; no change here. South Caradon, 50 to 60; the sale of ore here (449 tons) realised 2349*l.* 7s. Wheal Crebor, ½ to ⅝; the ore here (118 tons) brought 301*l.* 15s. North Treskerby meeting was held on Tuesday, and a call of 3*l.* per share, made payable by three instalments of 1*l.* each. A very encouraging report was given of the mine. West Seton, 7 to 9; West Tolgus, 42½ to 45; Mellanear, 3¾ to 4; East Caradon, ⅜ to ½. Marke Valley, ½ to ⅝; the sale of ore here (310 tons) brought 1109*l.* 10s.; Gawton ore (207 tons) realised 357*l.* 10s. 6d.

Lead Mines have been comparatively quiet, and show no great change either way. Quotations are still merely nominal. Roman Gravels, 6½ to 6⅝; the sampling for the month is 180 tons of lead ore and 30 tons of blende. There is no particular change in this mine. Ladywell will sample 25 tons of lead next week. East Van, 2¼ to 2⅜; the 70 east has been driven 5 fms. on the north part of the lode, and is poor. The same level west is driven 9 ft.; the end here seems to open out, and show irregular spots of lead. Van, 15½ to 16½; the sale of lead ore for the month is 500 tons, which realised 5142*l.* 10s.; 150 tons of blende sold for 2*l.* 17s. 6d. per ton. Pateley Bridge, 4 to 4½; no great change has taken place here. West Pateley, 1⅞ to 2¼. Tankerville, 3½ to 4; along the bottom of the 206 east there is a lode 7 ft. wide, and is worth from 4 to 7 tons of lead ore per fathom, and from the great increase of water which is now three times as great as it generally is, the agent is of opinion that one of the side lodes has in its underlay formed a junction with the main lode in the east end of the mine. Glenroy, ⅝ to ¾; the lode in shaft is 3 to 4 ft. wide, and on the footwall there is a mixture of lead and blende. Rookhope, 10s. to 12s. 6d.; Great Laxey, 15 to 16, ex div. D'Eresby Mountain, 30 to 40 for 1024th; a special meeting was held on Monday, when the resolutions to increase the capital by 512 shares were unanimously passed. The mine is therefore now in 1024 shares, and each original holder, on payment of 10*l.*, owns 2-1024th. The mine is looking well, and with an ample capital for all requirements and for working the valley, will now, it is expected, come into regular returns and profits. D'Eresby Consols, 8 to 10; the large vugh continues, and in the end on the east and west lode, driving to intersect Cobbler's lode, there are good spots and strings of lead and blende. Clementina, 1¼ to 1½; Aberllyn, 11 to 13; Bettws-y-Coed, 1 to 1¼; Browngelly, 2¼ to 2½; Grogwinion, 2 to 2½; Leadhills, 2 to 2¼.

West Chiverton, 2½ to 3½; West Wye Valley, 2¼ to 2⅜; Wye Valley, 2 to 2¼; this mine sold 40 tons of lead ore on the 16th, at 9*l.* 8s. 6d. per ton. Caron, 2 to 2¼; Hartington, 1½ to 2; Mawston, 60 to 65; Red Rock, 2 to 2½; St. Harmon, 2½ to 3; South Cwmystwith, 2¼ to 3.

P.S.—Since the above remarks were written we learn by telegram from Cornwall that the tin standards are up again 2*l.*, and tin mines are firmer.

Foreign Mines.—Blue Tent, 2⅜ to 3. Chontales, 10s. to 15s.; the advices show a return for August of 412 ozs. of gold, valued at 1050*l.* 8s.; costs for month, including 104*l.* charged to construction account, 770*l.* 8s.; profit, 280*l.* Cape Copper, 28 to 30. Santa Barbara, 1½ to 1⅝; the advices show a profit of 711*l.* 18s. 7d. in the month of August; the gold returned, 4188 oits., is valued at 1779*l.* 18s., and the costs estimated at 1067*l.* 19s. 5d.; the lode continues to produce good quality ore, and an encouraging improvement in the yield of gold per ton. Pitanqui, par to ¼; Javali, 7s. to 9s.; the advices here show gold return for August, 520 ozs., 1325*l.*; expenditure, 937*l.* Colorado, 2 to 2¼; Don Pedro, 10s. to 12s. 6d.; Eberhardt and Aurora, 3½ to 4; Frontino and Bolivia, 2¼ to 2⅜; New Zealand Kapanga, ⅜ to 1¼; New Quebrada, 1⅜ to 1⅝; Hultafall, 3 to 3½; Port Phillip, 10s. to 12s. 6d.; Richmond, 9¾ to 10¼; St. John del Rey, 270 to 280; South Aurora, ¼ to ⅜.

*** Good news reaches us from Cornwall. By telegram (Penzance, Friday) we learn that the smelters to-day advanced the tin standards 2*l.* per ton. The standards now are—Superior common, 53s.; superior fine, 54s. per cwt. A special meeting of adventurers in South Crofty was held to-day, to consider the propriety of continuing the mine. It was resolved to continue the mine, but to confine operations to East Pool lode, the cost of which will not exceed 200*l.* a month.

The Market for Mine Shares on the Stock Exchange has been, if possible, more inanimate during the past week than in the previous one. To-day, however, there has been a considerably better feeling in connection with Richmonds and Rio Tintos, and the telegram from St. John del Rey stating that "rains have set in" was taken advantage of to effect a few sales. The prices realised for the stock was 280, 275, and 282½ respectively. There has likewise been one transaction each in Exchequer, New Quebrada, Scottish Australian, and United Mexican. Colorado United were also done at 2¼ to 2⅜. The Flagstaff Company, which is said to be utterly impecunious that even the cash necessary to pay postage on a notice of meeting, which would otherwise have been held, was not forthcoming, has been again before Mr. Justice Hawkins, and the result is given below. It is suggested, as the most business-like proceeding, that the present company should be at once wound up, and that an effort should then be made to re-locate property, so as to be able to offer it to the shareholders at a price—the net cost of locating and patenting—which will render the earning of dividends possible. It is very justly complained by Americans that American mines have not had a fair chance in England. Not a single American mine has they say been placed on the London market except at such an enormous advance on the cost of locating, patenting, and exploring that reasonable remuneration to the capitalists for their money is out of the question. It is complained, too, that most of the overcharge has gone into the pockets of English promoters and financiers, and that but a very small percentage has reached the American properties at all. The natural result is that it is now practically impossible to raise capital for working any American mine however good, the great success of the Richmond, the Sierra Buttes, and other enterprises which have paid well, notwithstanding the heavy premium at which they were purchased, being lost sight of amongst the almost invariable failures which have resulted from the causes mentioned.

As British capital is likely to be sought within the next few weeks for endeavouring to develope more than one of the modes of electic illumination now before the public, it may be well to state briefly what has actually been done in connection with them. The only systems which as yet have so far succeeded as to be able to maintain a fairly regular light for half-a-dozen hours are the Jablochkoff, which is that used in the Avenue de l'Opera, Paris, and the Lontin, a modification of the Jablochkoff, which is now exhibited nightly around the Gaiety Theatre in the Strand, London. There is really very little, if anything to choose between the two lights in point of steadiness and brilliancy, but it is stated that the Jablochkoff has the advantage as regards economy, although exact figures are unobtainable in either case. A short time since the Metropolitan Board of Works undertook the investigation of the subject with a view to a preliminary trial, and this (Friday) afternoon the verdict has been pronounced in favour of the Jablochkoff, the Works and General Committee connected with that body having brought up their report recommending that arrangements be made to test the value of the electric light along the whole length of the Victoria Embankment, and subsequently, if considered desirable, upon Waterloo Bridge, and with that view that an offer which has been made by the Société Général d'Electricité to assist the Board in carrying out the experiment by means of the Jablochkoff light, be accepted. The reason of the acceptance appears to be not so much the ascertained value of electric illumination as the desirability of finding whether the supercession of gas is probable. There can be no doubt that the question as to the value of the electric light is one of the greatest interest, owing to the large amount of capital invested in gasworks. A great many persons are anxious to know their position in reference to the electric light, and the Works Committee thought the Board should make an experiment with a view to test the new discovery. When the matter was brought before the board two amendments were proposed declaring immediate action premature; one amendment being in the interest of the Lontin and Edison systems, the other, a much more business one, with a view to secure adjournment for a week, in order to get the engineer's report as to the probable cost of the proposed experiments; but upon Mr. Richardson stating that the cost would only be about 600*l.*, the report was agreed to. From all that can at present be ascertained, the Edison discovery has been much exaggerated, and most persons competent to judge have concluded, from the result of their investigations, that the cost of generating the electricity, not the division of the current, is the real obstacle. At present nothing better than one lamp per 1½ horse-power has been reached, and this can only prove commercially unremunerative.

St. John del Rey, 275 to 285; the latest telegram from Morro Velho, dated Rio de Janeiro, Oct. 17, states that the produce for the first division (eight days) of October was 9500 oits., of the value of 3681*l.*, the ley of the ore being 6·6 oits. per ton, equal to 8·2 oits. per ton by the old measurement. The previous telegram stated that the produce for September was 30,500 oits., and the ley of the ore 5·8 oits. per ton. It is explained that the duty of the stamps is short, owing to short supply of water; all is going well. Referring to the August operations, the advices state that with a view to a more reliable estimate of the value per ton of the mineral laid open in the western part of the mine, the treatment of the ore freed from kilas has been confined to the output derived from sections 355 and 234—the two most western sections of the mine. An average return of 7·174 oits per ton for so large a body is an assuring fact that the late addition to the mineral ground west may now be considered as an important reserve. Don Pedro North del Rey, ⅛ to ¼; the telegram from Rio, dated Oct. 11, gives the September produce at 1650 oits. Santa Barbara, 1⅛ to 1¼; the latest advices state that during August 4188 oits. of gold were obtained. There was a profit on the working expenses of 387*l.* 12s. 6d.

Richmond, 9¾ to 10¼; the manager's report, which is the only piece of documentary matter to hand, is really of little interest, inasmuch as it is dated Sept. 25, and since then the fire has happened. All explorations were being pushed on in the mine as fast as possible, and as has since been learned from the telegrams received at the office, these have resulted in some very good discoveries, which will be ready to aid in giving a larger supply of rich mineral to the reconstructed furnaces as soon as they are ready to go to work. Placerville, 2¼ to 2⅛; further encouraging news has, it is said, been received respecting this company; the operations are progressing satisfactorily, and with every appearance of a good result.

Flagstaff, ⅛ to ¼; the adjourned application of Mr. Snell for leave to use the company's name in its litigation with Tarbet, and to have the carriage of the appeal of the company to the Supreme Court at Washington, came on last Wednesday before the vacation judge, when it was again opposed by the company, and it appeared from the statement of counsel that the company had given notice of appeal, and remitted the necessary deposit, and that a meeting of debenture-holders had been held by the trustee, and resolutions passed expressive of decided objection to the application being granted. Mr. Justice Hawkins said no case was made out requiring immediate decision, and he ordered the matter to stand over till Nov. 8, when the Master of the Rolls, in whose court the proceedings originated, would be present, and would deal with it.

The Comstock advices this week refer to the Bodie Mine. Some of its ore, assayed at the Consolidated Virginia assay office, yielded as follows:—Gold, $102 996·60; silver, $4826 75; making a total yield at the rate of $107,753·35. One of the "bonanza kings," Col. Fair, says this is the largest assay ever made in the Consolidated Virginia office. At the time of the strike in the Bodie Mine nearly all the shares were in the hands of Canadian wood choppers, who had bought them at 40 or 50 cents. per share. When an effort was made to purchase the shares some facts in regard to the "strike" leaked out, and the price ran up rapidly to more than $20 per share.

The market for Hydraulic Mine shares is without change. Blue Tent, 2½ to 3; advices received during the week announce that washing was proceeding with the water from Fall Creek, and a later telegram gives particulars of a clean-up, resulting in a return of $10,800. At Fall Creek the aqueduct necessary to carry the water from the company's lakes to the head of Blue Tent ditch are all completed, and the water is steadily flowing through to the Blue Tent Mines, enabling them to do profitable work.

Hultafall, 3 to 3½; there has been no news of any importance this week from the mines. The new dressing machinery is expected to be in work next week. The prospects are highly favourable for a successful issue.

Lead Mines have been without material change; since the completion of the fortnightly settlement on Wednesday the tendency has been better, enquiries being made for shares at the lower prices. Van, 16 to 18; the usual monthly report appears in another column. There is no particular change in the appearance of the mine. The four-weekly sale of 500 tons of lead and 150 tons of blende realised 5573*l.* 15s.

Mineral Corporation, 10 to 11; the driving of the levels at the Hafna Mine continues as reported last week. Capt. Bennetts reports that on Wednesday they broke two fine rocks of lead from the lode, one of which weighed 215 lbs., and the other 280 lbs., and that he has not seen such rocks of solid lead since he left the Chiverton district. The mine is altogether looking well. Grogwinion, 2½ to 3; operations continue to progress satisfactorily at this mine. Wye Valley, 2 to 2½; 40 tons of lead were sold on the 15th at 9*l.* 8s. 6d. per ton. Mine looking well. West Wye Valley, 2¼ to 2¾; all going on well, and good progress making at all points. Caron, 2 to 2¼; the crushing of ore is going rapidly forward, and a first parcel will be sampled in a few days. The new machinery gives great satisfaction. St. Harmon, 2¼ to 3; no fresh news this week, but information respecting the cross-cuts towards the main lode is expected shortly. Red Rock, 2 to 2½; all is going on well here, and mine steadily growing richer.

Pant-y Mwyn shares are quoted at 5 to 5¼; in sinking the Modlyn shaft, which is about 210 yards to the east of Griffith's shaft, from where they are returning about 70 tons of lead monthly, they have struck into rich ore, which the engineer believes to be the top of the great course of ore dipping towards it from Griffith's shaft and workings. This is about 125 yards below the great day level, or 125 yards from surface. The character of the heading side of the lode is congenial for the production of lead deposits of great magnitude, and they will shortly be extracting large quantities of ore from this section.

Subjoined are the closing quotations:—

Assheton, ⅜ to ⅝; Carn Brea, 30 to 35; Devon Great Consols, par to ⅛ prem.; Dolcoath, 22 to 24; East Caradon, ¼ to ¼; East Van, 2⅝ to 3; Glenroy, ⅛ to ⅜; Glyn, ⅛ to ¼; Great Laxey, 15 to 16; Hingston Down, ⅛ to ⅜; Leadhills, 2 to 2¼; Marke Valley, ⅜ to ⅝; Parys Mountain, ⅛ to ⅜; Pateley Bridge, 3¾ to 4¼; Penstruthal, ⅛ to ⅜; Roman Gravels, 6⅛ to 7⅛; Tankerville, 3½ to 4; Tincroft, 6 to 7; Van, 16½ to 17½; West Basset, 1 to 1⅛; West Chiverton, 2 to 4; West Pateley, 1¾ to 2¼; Wheal Grenville, 1⅛ to 2⅛; Almada and Tirito, ⅛ to ⅜; Birdseye Creek, ⅛ to ¼; Blue Tent, 2¼ to 3; Cape Copper, 28 to 30; Cedar Creek, ⅛ to ¼; Chontales, ⅛ to ⅝; Colorado United, 2¼ to 2⅜; Don Pedro, ⅛ to ¾; Eberhardt and Aurora, 3½ to 4; Exchequer, ¼ to ⅛; Flagstaff, ¼ to ⅛; Frontino and Bolivia, 2¼ to 2⅛; Hultafall, 3 to 3⅛; Javali, ¼ to ⅜; Kapanga, ⅜ to 1⅛; Last Chance, ¾ to 1; New Quebrada, 1⅛ to 1¼; Placerville, 2¼ to 3; Plumas Eureka, 2⅛ to 2⅜; Port Phillip, 7-16ths to 9-16ths; Richmond Consols, 9⅞ to 10⅛; St. John del Rey, 275 to 285; South Aurora, ⅛ to ¼; United Mexican, 3¼ to 4.

Collieries.—The market for coal and colliery shares remains much the same as it was last week—and, in fact, as it has been for some time past. From some districts we hear of continued dull trade, without any improvement in quotations; but from others, such as Derbyshire and Newcastle, there is a marked improvement in house and gas coals, with a fair demand for steam fuel, and better quotations. Lancashire and Yorkshire report but slight change for the better, but the markets are not by any means in a settled condition. Shipments nearly everywhere show a slight falling off, but in this respect South Wales is less badly off than other shipping centres. Coming down from districts to individual collieries, we find amongst the best of them either actual improvement or decided signs of coming better times Chapel House reports a larger output, and a good demand for fuel, and there is no doubt that the very large developments which have been going on at this colliery will lead to a greatly increased raising of coal, and a comparatively larger return of profits. The shareholders have had to wait long for results of their expenditure, but the outlay has been a most judicious one, and will pay them well in the long run. Yniscedwyn has good orders on hand for its fine anthracite coal, at remunerative prices, and with a slight improvement of trade, and even without it, this company bids fair to be one of the best we have on the market. Alltami reports that its trade continues to improve, while Llay Hall is increasing its output, and realising good paying prices. The former shares close at 3 to 3⅛, and the latter at 7 to 10. Chapel House shares are steady, at 3 to 3⅛; Cardiff and Swansea at ⅛ to ¼; Yniscedwyn, 10 to 10¼; Newport Abercarn, 4 to 4¼; New Sharlston, 3 to 4; Thorp's Gawber, 1⅝ to 2.

At the Truro Ticketing, on Thursday, 2080 tons of copper ore were sold, realising 6703*l.* 8s. 6d. The particulars of the sale were—Average standard, 86*l.* 19s.; average produce, 6⅞; average price per ton, 3*l.* 4s. 6d.; quantity of fine copper, 142 tons 17 cwts. The following are the particulars:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
Sept. 19	2427	£ 90 1 0	6¾	£3 0 6	9s.5½d.	£47 5 3
,, 3.	1675	85 15 0	7½	3 13 6	9 9½	49 0 0
,, 17.	2080	86 19 0	6⅞	3 4 6	9 5	47 0 0

Compared with the last sale, the decline has been in the standard 2*l.* 10s., and in the price per ton of ore about 3s. 6d.

Leadhills.—As will be seen by the manager's report, in another column, the discovery of lead ore in the 20 fm. level is an important point, where, so far as seen, it is worth 6 to 7 tons of ore per fm.

Gorsedd and Merllyn.—Since the recript by us of the fortnightly report (published in its usual place) very satisfactory news is to hand.

Derwent.—In the reports presented at the general meeting held on Wednesday it was stated that although the working costs were 140*l.* less than in the preceding year, the sales of pig-lead were about 100 tons in excess. The reserves, which at the last meeting were estimated at 550 fms., are now 1080 fms., and will be further increased by the end of the year. Special attention was drawn to the probabilities of the north vein, which had been proved in the little limestone, being found equally productive in the great limestone. The vein would be cut in about 30 fms. driving, and could be worked on for 18,000 fms. The 95, east of Jeffries', on middle vein, worth 1½ ton per fathom, was being driven in virgin ground, which would give in the great limestone alone 12,000 fms. of stopes. The present reserves were such as to warrant a promise of greatly increased returns of ore, and, as the Chairman remarked, a better price for lead was all that was required to make Derwent a very prosperous concern.

Great West Van.—At the Auction Mart, yesterday (Friday), the Great West Van Mine and machinery were sold to Mr. Barker for 2050*l.* This property was sold a few years ago by the now purchaser to a limited company for 26,000*l.*, since which machinery has been added, and a new shaft sunk 50 fms.

West Pateley.—An improvement is reported in the 28, east from No. 2 shaft. The manager says, "a branch has come on the south side of level as a feeder to the vein, which is now much wider and richer in ore." Rapid progress is being made in opening out the Craven Cross section of the property; the agent hopes in a very short time to draw all the stuff direct through Craven Cross shaft, which will be a saving of over 1*l.* per fathom in tramming alone. The ore at the smelt-mill will be weighed off in a day or two, and another parcel will be got ready as soon as possible.

White Cliff Lead Mine (Llanrwst).—We are informed that a second issue of 1000 shares in this company has just been completed, the names of the allottees including some most influential gentlemen in Birmingham and London. The prospects of the mine continue to be most encouraging, and a new lode has recently been opened up, far superior in quality to anything yet found here. This discovery, together with the fresh accession of capital and influence mentioned above, cannot fail to make the White Cliff Lead Mining Company before long a prosperous and paying concern.

Tankerville.—The 206 west is worth 1½ ton per fathom, and improving. Between the shaft cross-cut and Hooton's winze the lode in the bottom of the 206 east is 7 ft. wide, worth from 4 tons to 7 tons per fathom. The 206, east of Hooton's winze, is worth 2 tons. There is a good course of ore all the way down, and for several fathoms along the bottom of No. 2 winze below the 92 east. Capt. Waters is of opinion, from the greatly increased flow of water (which has suspended the sinking of this winze) that one of the side lodes has come in junction (in underlay) with the main lode in the east end of the mine. Eight men are employed to sink the 206 to cut down the water in question, when it is hoped an important discovery will be made. The winze below the 192, 25 fms. west of shaft, is going down in a lode worth 2 tons per fathom, and improving.

Dunn's Boring Machinery: Derwent Mines.—In Captain Morpeth's report, read at the general meeting on Wednesday, he stated that the use of Dunn's boring machine in the 93 fm. level, on middle lode, had enabled them to drive about three times faster, and at less cost. Also that "another advantage (and a very important one) in connection with boring machinery in this level is that the exhaust air ventilates the place well; whereas if working by hand labour the level would be airless, and both difficult and very injurious for the men."

Twenty bonds of the Panulcillo Copper Company (Limited), for 100*l.* each, amounting together to 2000*l.*, were this day drawn. The drawn bonds and coupons due Dec. 15 next may be presented at once to the Consolidated Bank for payment, in anticipation of maturity, under discount at the rate of 5 per cent. per annum.

*** With this week's Journal a Supplemental Sheet is given, which contains:—Original Correspondence: Coal-Cutting Machines: the London Coal Supply (W. J. Thompson); Great Northern Railway (W. J. Thompson); Volley Blasting (J. Darlington); Electric Blasting (J. Barkell); Electric Illumination—the Jablochkoff Light (T. Smith); Explosives; Tasmanian Tin Fields (J. Mufford); Australian Tin; the Mineral Resources of Syria (Josef Cerwik); Canadian Mining Notes—No. VI.; the Eclipse Gold Mining and Quartz Crushing Company (R U. Potts); Javali Mine Sentein Silver-Lead and Blende Mine, France (J. Lean); Rock-Boring Machinery (Le Gros, Mayne, Leaver, and Co.); Air-Compressors, and Rock-drills (J. G. Cranston; Rock-Drills in Mining; Rock-Drills—Patents (E. Edwards); "Engineer," and the Llanrwst Mine (R. Knapp)—the Hoffman Patent Tripod Head *(illustrated)*—Direct-Action Pumping Engine—Producing Electric Light—Registration of New Companies—Foreign Mining and Metallurgy—Foreign Mines—Patent Matters—Meetings of Derwent, Wheal Basset, and Canadian Copper Companies, &c.

ZINC ORES.

ARMAND FALLIZE,
INGENIEUR-CIVIL, A LIEGE (BELGIUM),
BUYER
1.—CARBONATED AND OXYDED ZINC ORES (CALAMINE, &c.
2.—ZINC AND LEAD ORES MIXED TOGETHER, BUT DRESSABLE KINDS ONLY.

CAPPER PASS AND SON, BRISTOL
PURCHASERS OF
LEAD ASHES, LEAD SLAGS, SULPHATE OF LEAD, HARD LEAD, BRASS SLAGS AND ASHES, COPPER REGULUS, MATTE, SCORIA, TIN ASHES, TERNE ASHES, &c., and MIXED ORES or REFUSE, containing LEAD, COPPER, TIN, or ANTIMONY.

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184, BUCHANAN STREET, GLASGOW,
EXECUTE COMMISSIONS FOR THE PURCHASE AND SALE OF SCOTCH PIG-IRON WARRANTS.
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Steel and Steel Tools, Pig and Manufactured Iron, Hemp and Wire Ropes fo all purposes, Indiarubber Goods, and Furnishings of every description for Collieries, Founders, Engineers, Saw-millers, &c.

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MINING AGENTS AND ENGINEERS,
VALPARAISO AND SAN IAGO,
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Assays or Complete Analyses made of Copper, Silver, Lead, Zinc, Tin, an other Ores.
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MINING AGENTS AND SURVEYORS,
MINSTERLEY, SHROPSHIRE.
Mines inspected and reported on at home and abroad.

THOMAS BROTHERS,
MINING SHAREBROKERS AND MINERAL SURVEYORS,
STRAND CHAMBERS,
STRAND STREET, LIVERPOOL.

PANT-Y-MWYN MINE.
MESSRS. BRABNER AND COURT, 40, NORTH JOHN STREET, LIVERPOOL (the Solicitors of the company), have in their hands the following LOTS of SHARES to DISPOSE OF:—
TEN at £4 10 0
TWENTY at 4 5 0
TWENTY-FIVE at 4 0 0

Notices to Correspondents.

*** Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt; it then forms an accumulating useful work of reference.

The Supplementary Sheet.—We have received occasional complaints, and of late a good many, that the Journal delivered by country booksellers without the Supplement. Subscribers would oblige us by demanding that the paper should be handed to them complete, as every Journal is accompanied by the Supplement when it leaves our office, and the fault of omission must rest with the country bookseller or their London agent.

Received.—Will "Adventurer in Mines," who writes from Ashburton respecting the Whitsun Mines, send us his name, as he neglected to sign it to his letter?—We cannot publish the letter sent by "A Shareholder," in reply to the advertisement of Messrs. Brabner and Court, of Liverpool, in last week's Journal—"Diogenes" (Stannaries Court)—"Stannum"—"Shareholder" (Cambrian)—"Constant Reader" (Leeds)—"S. F."—"G. H. R." can obtain all the information he requires from Hunt's Mineral Statistics, published by Longmans and Co.—"Shareholder" (Bodidris).

Important Notice—Reduction of Postage on the "Mining Journal."—In consequence of the new Postal Convention, which came into operation on July 1, the postage of the *Mining Journal* to many countries will be reduced to one fourth. Henceforth the subscription will be 1*l.* 10*s.* 4*d.* per annum (39 frs.), postage included, for the following countries. The amount will, if desired, be collected at the subscriber's residence at the end of each year. The subscription continues until countermanded:—Austria, France, Belgium, Denmark (including Iceland and the Faroe Islands), Egypt, Germany, Gibraltar, Greece, Heligoland, Italy, Luxemburg, Netherlands, Norway, Portugal (including Madeira and the Azores), Roumania, Russia, Servia, Sweden, Switzerland, United States, Malta, Turkey, Morocco, Tunis, and the Canary Islands. Spain 1*l.* 19*s.* (50 frs.)

American Subscribers.—In reply to several enquiries, it may be stated that subscribers in the United States can be supplied with the *Mining Journal* post free, at the price of $8 50c. gold per annum, payable in advance, by remitting to Mr. D. Van Nostrand, publisher, and importer of scientific books, &c., Murray-street, New York; or, direct to our Office, 26 Fleet-street, E.C.

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, OCTOBER 19, 1878.

THE ELECTRIC LIGHT.

In several articles that appeared in the Journal during the present and the previous year as to the probable duration of our coal fields, we stated that Sir W. Armstrong, Prof. Jevons, and others, in estimating the resources of the kingdom, and the time when our stores of fuel would be exhausted, based their calculations upon a progressive annual increase in the consumption, without taking into consideration the great likelihood that gas from coal would be in a comparatively short time superseded by a far more powerful and economical light. Several times, too, during the present year have we directed attention to the electric light itself, believing that it could be so arranged and produced as to light our streets and public buildings more brilliantly and cheaper than was now done by gas. These views were shared in by not a few of those who had money invested in gas companies, so that during the last month or two shares have gone down, although directors and interested parties have pooh-poohed the idea of coal gas having to give way to any other system of lighting. Recent experiments, however, both in Paris and London, and the reports which have appeared in the papers of late, have led to quite a panic on the part of the shareholders of the metropolitan gas companies, and to some trepidation amongst those connected with the companies in the country. This state of things led to the directors of some of the London companies at their half-yearly meeting, held in the first week in October, endeavouring to counteract the bad impression which had gone forth by enlisting the services of the most gifted and eloquent shareholders. Accordingly at the half-yearly meeting of the London Gaslight Company, as well as at that of the Phœnix Gas and Coke Company, Mr. John Leng, one of the proprietors of the Dundee Advertiser, made long and eloquent speeches, showing that shareholders had nothing to be afraid of. The Chairman of the Gaslight Company said that the electric light might be used in open spaces, and in rooms where people were anxious to have a splendid light, but he had not a doubt that their future, "so far from being injured, would be immensely benefited by this discovery." This is certainly saying a good deal, but what has taken place during the past week or ten days in the share market shows that the shareholders do not coincide with the views of the Chairman. Mr. Leng was almost as enthusiastic, for whilst ridiculing the first panic, he said there was no fear of gas being superseded for houses, shop, and office purposes, and that if he had 100,000*l.* to spend he would buy up every share of the London gas companies offered at the then prices. He admitted that the position of the companies, owing to the majority of the shareholders knowing so little of the subject, was such that the shares might be run down 40 or 50 per cent. by the issuing a prospectus of a Grand Electric Light Company for lighting all London by electricity. This statement appears to have been made just on the eve of the announcement of Mr. Eddison's important discovery of sub-dividing the light indefinitely, and the result has been something like what Mr. Leng shadowed out would be the case, and we are rather inclined to believe that that gentleman's views have undergone considerable modification since the discovery was wired across the Atlantic. Mr. Eddison says that when the brilliancy and cheapness of the light are made known to the public, which will be in a few weeks, or just as soon as he can protect the process, illumination by carburretted hydrogen gas will be superseded.

This announcement following so quickly on the heels of the statements made by the directors of several of the gas companies, and of Mr. Leng, will be anything but assuring to the shareholders, who have stood by the former, whilst those who have believed in the new light will be desirous of getting shut of their shares. "The panic, and the prospectus" of Mr. Leng are now matters of history, for during last week three companies in connection with lighting by electricity were registered, the promoters being men of the highest position in the financial world. The "Electric Lighting" Company is announced, with a capital of 100,000*l.*, amongst the promoters being Baron Emile Erlanger, Sir Philip Rose, and Sir Leonard Lawson. Then there is the "British Electric Light Company," also with a capital of 100,000*l.*, and having amongst its promoters Mr. E. J. Reed, M.P., Mr. Latimer Clarke, and Sir Charles T. Bright. This certainly looks like business, and scarcely justifies the position taken up by certain of the metropolitan companies. They say that they should not be much affected were the streets lighted by electricity, for it would lead to a loss of not more than 1*d.* per 1000 ft. of gas, whilst the cost of the electric light would be enormous. This latter statement is entirely opposed to that of Mr. Edison, who says he can utilise the gas burners and chandeliers by placing a light meter in each house with wires passing through, and tapping small contrivances placed over each burner, so that when it is desired to light a jet it is only necessary to touch a little spring. The cost, too, will be considerably below that for gas, whilst there will be a clear, brilliant light, instead of a dirty yellow one, injurious to health and comfort. This, we are told, can be accomplished; and, coming as it does, on the authority of the inventor of the telephone, the phonograph, and other valuable scientific instruments, we do not see why it should not be accepted as accurate. If not only our streets but public buildings and houses can be lighted up by electricity, the gas companies in time will have the ground cut from under their feet. They will, no doubt, make a fight, and a stout one, against an invention that promises to all but extinguish them and their light; but they are not likely to receive much sympathy or support from the public, who have been so long at their mercy, and have certainly not been over indulged in any way. The breaking up of the gas monopolies, not only in London but throughout the kingdom, would be hailed with satisfaction by consumers other than shareholders, for the principal object of the directors appears to have been to secure the 10 per cent. dividend. The public have grumbled not only at the quality of the gas supplied, but as to the price as well, but their complaints at times have not been even courteously attended to. Still the gas companies will do well to look forward to the future, so that their plants and appliances may be made available should the electric light become the recognised lighting agent of the day.

Coal gas has reigned now for more than 60 years, and it can only be superseded by a light of greater brilliancy and cheapness, and if these desiderata are attained, science will have made another vast stride in the interest of all classes, not only here but throughout the civilised world. But leaving gas for street and houses purposes on one side, there are other ways in which the electric light, if as successful as we believe it will be, must become a most valuable agent. It will be able to solve a most important problem affecting the lives of many persons now working in our mines. It is generally known that before an explosion can take place in a colliery there must be a meeting of two forces—that is the pro-carburetted hydrogen gas, or fire-damp, and a light or flame of some kind or other. Such a light may be from a match, the wick of an oil lamp, either by being open or defective, and when it comes in contact with an atmosphere in which the gas forms one-eighth or one-ninth of the whole volume, then the result is an explosion. Now, if the electric light can be introduced into our mines, divided as it can be, then we might expect to find explosions of very rare occurrence. Thus there appears to be no reason why electricity should not be made applicable for mining instead of lamps, and this would affect what our mining engineers and foremost chemists have long been looking for. It would give the men a light such as they have never dreamt of, enabling them to get a much larger quantity of coal in a given time than it is possible for them to bring down by the light of the lamp, which barely suffices to make the blackness of the working places visible. It would also benefit both masters and men, and greater safety would be ensured, for explosions would be all but impossible, whilst the miners would be better able to guard against falls of roof and coal.

There is also another item of importance in connection with the electric light, and that is the saving of coal. From the report of the Select Committee on Coal it appears that the quantity used in the making of gas in 1869 was 6,311,980 tons, and may now be taken at 8,000,000 tons annually. In the course of a very few years it may be assumed that a saving of about 5,000,000 tons of coal will be effected yearly, whilst our exports for gas making will also decline. As the miners are crying out for limitation of production there is every probability that they will be gratified, but not in the way they expect, for whilst the demand for home promises to become considerably less, so far as gas-making is concerned, less will also be required for the same purpose abroad. The requirements, then, instead of increasing at a certain rate annually, as laid down by our experts, will decline, and as the productive power will be greatly in excess of the consumption—as it is at the present time—the price of coal must, consequently, be low. One advantage of this must be that iron will be cheaply produced, so that we shall be able to maintain our position abroad as sellers of iron, steel, machinery, and hardware—the result of cheap fuel consequent on the adoption of the electric light.

OUR EXPORTS.

The returns for the last month, and for the nine months ending Sept. 30, show that our exports for the year so far show a decrease of 1·9 per cent. as compared with 1877, and of 4 per cent. as compared with 1876. So far as pig-iron is concerned there has been during the present year an increase in the quantity exported, but such has not been the case with respect to the manufactured material as well as steel. The total of pig sent out of the country during the past nine months was 691,216 tons, against 670,548 tons in 1877. Singular to say, Germany and Holland have been our best customers, taking between them nearly one-half of the exports. Values, however, have undergone considerable changes, for whilst the average price in 1877 was 57*s.* 9*d.* per ton, this year it was only 53*s.* 4*d.* per ton. This shows how unprofitable has been the trade, and the difficulties our ironmasters have had to contend with to maintain their position in the foreign markets. Bar, bolt, rod, and angle iron declined from 190,327 tons for the first nine months of 1877 to 16,783 tons for the corresponding period of 1878, whilst the price in the latter was 7*l.* 4*s.* 6*d.* per ton, being 12*s.* per ton lower than in the previous year. Railroad iron of all kinds has fallen off of late, the quantities for the two years having been respectively 363,113 tons and 349,589 tons, whilst the price has also declined from 7*l.* 18*s.* 6*d.* to 7*l.* 12*s.* per ton for the last three quarters. In hardware and cutlery there has been a decrease to the extent of about 30,000*l.*, being equal to 1·2 per cent. During the present year of cutlery and hardware America took to the value of 229,751*l.*, showing that we are still doing a fair trade there, whilst Australia is credited with 451,263*l.*; Brazil, 159,221*l.*; Germany, 133,035*l.*; and British India, 186,863*l.*

Australia has been our best customer for hoops, sheets, and plates, British India holding the second place. For the nine months of the last three years the quantity exported was 148,422 tons, 146,673 tons, and 141,594 tons, showing that the consumption had been unusually even. The same may also be said with respect to tinplates, of which we sent away away during the past nine months 112,290 tons, of the value of 2,005,868*l.*, America taking no less than 76,594 tons. In both cast and wrought-iron goods there has been very little alteration as regards weight, for whilst in 1877 the exports were 191,972 tons this year they were 190,069 tons. This year Brazil took 33,094 tons, Australia 35,213 tons, and British India 29,378 tons. Unwrought steel figures in the returns for the last three quarters at 17,178 tons, and old iron for remanufacture at 26,457 tons. The total value of the iron and steel exported during the first nine months of the two years was 15,016*l.*, and 13,913,187*l.*, a decrease equal to 7·3 per cent. for the year 1878. But if we take September alone, and compare it with the same month of 1878, the falling-off has been no less than 15·4 per cent. In steel rails the most business transacted has been done with Russia, Germany, Australia, British North America, and India, the quantity exported during the present year, having been 194,602 tons, against 170,138 tons in 1877. On the other hand, iron rails declined from 140,989 tons last year to 96,453 tons in the present one. This shows that the Bessemer rails are fast superseding those of iron. There has been a marked increase in the exports of unwrought copper, which in the first three quarters of 1877 were 155,735 tons, and for the same period of 1878 they were 283,954 tons. Of the latter France took 132,736 tons, Germany 54,405 tons, and Holland 31,266 tons. Wrought or manufactured copper also shows to advantage, there having been an increase this year of 12,000 tons, the total being 178,392 tons, fully one-third being taken by British India.

Owing to the low price at which our colliery-owners have offered their coal, they have maintained their position in their old markets, so that the tonnage sent away to the end of September compares favourably with the corresponding term of last year. Taking the first three quarters of the three years, the respective quantities were—12,303,848 tons, 11,807,895 tons, and 11,947,698 tons. Of the latter there was sent to France 2,276,990 tons, Germany 1,434,209 tons, Russia 1,101,917 tons, and Italy 864,676 tons. Germany, however, took from us 117,750 tons less than in the same period of 1877, showing, as we have pointed out in previous notices, that the resources of that country are being more fully developed than formerly. British Iudia took from us during the first three quarters of last year 716,827 tons, and up to the end of September last 547,251 tons. It is thus evident that India is becoming less dependent upon us for fuel, and no doubt will continue to take a diminished tonnage, seeing that there is plenty of coal in that country. Turkey of late has been a better customer than ever before, whilst our exports to Malta have been unusually heavy during the present year.

The price of coal has been gradually declining for a long time past, the average for the first three quarters of 1876 being 11*s.* 1*d.* per ton; for the same months of 1877 it was 10*s.* 3*d.* per ton, and for the present year 9*s.* 6*d.* per ton. Therefore, notwithstanding the increased tonnage of coal exported, the decline in value this year, as compared with the same period of 1877, has been 6·6 per cent. In conclusion, we may say that last month our imports of ironstone were no less than 116,983 tons, against 103,045 tons for the same month of last year, whilst the imports of manufactured increased from 1,175,510 tons for the nine months of 1877 to 1,581,642 tons during the present year, showing that our iron manufactures are meeting with increased competition in our own home markets from our foreign neighbours.

SUCCESSFUL BELGIAN ENTERPRISE.

Despite the enormous difficulties of the times the great and important Belgian concern, the John Cockerill Company, contrived to realise in its last financial year a respectable profit, with which it paid a respectable dividend. We say "paid," but we believe that the dividend is not yet actually distributed, although the funds for its payment are in hand. The turn-over of the company in the year ending June 30, 1878, amounted to 1,303,713*l.*, or about 130,000*l.* more than the corresponding turn-over for 1876-7. The production of cast-steel effected by the company in 1877-8 was nearly equal to that effected in 1876-7. The consumption of coke per ton of pig produced scarcely varied during the twelve months ending with June, 1878, but important reductions were effected in 1877-8 in the expenses of manufacture. The cast-steel made last year was also generally of good quality. The Bessemer foundries, the production of which had been 65,000 tons in 1876-7, turned out 85,000 tons in 1877-8 with a very small waste, showing that great care was brought to bear last year upon the details of the manufacture. The company's rail-rolling mills contrived to produce in a moment of extreme pressure this year 2000 tons of good rails in a single week, but orders did not follow each other sufficiently rapidly to secure a maintenance of this great activity, and the total production effected for the year did not exceed 57,000 tons, or 12,000 tons more than in the preceding twelve months. The expenses of manufacture also experienced a fresh reduction in 1877-8. The orders received by the company last year for steel tyres and small steel brought the undertaking a fair contingent of work. Upon the whole, notwithstanding a continuous fall in all steel products, the directors are enabled to announce that in consequence of a greater production and economies introduced into the working, the profits realised in 1877-8 were satisfactory. The stock of cast steel on hand at the close of June, 1878, was at the same time 10,359 tons, as compared with 4923 tons at the close of June, 1877. With order books better filled, and with a greater production of steel, the stock of cast-steel, or steel pig, would have been much less considerable. For the rest it is not a bad thing to have large supplies of what may be called raw materials on hand at the prices at which they are now quoted.

The directors had hoped to do a considerable business with Russia on the definitive conclusion of the Berlin treaty, but this hope has not been by any means fully realised. The Sommorrostro Mineral Company, a Franco-Belgian undertaking, of which the John Cockerill Company was the founder in conjunction with the Denain and Anzin and the Montataire Companies will soon furnish the John Cockerill undertaking with its own minerals, which, conveyed from Bilbao to Antwerp in the John Cockerill Company's own steamers, will enable the company to contend upon advantageous conditions with the best situated and the best tooled industrial establishments of Great Britain and the Continent of Europe. As the position of John Cockerill Company improved to some extent last year, it naturally added to its working staff in 1877-8. At the close of June, 1877, the company's workpeople and employees numbered 7490, while at the close of June, 1878, the corresponding total had risen to 8069, showing an increase of 559 men, or nearly half the reduction effected during the preceding year. It is worthy of note that, notwithstanding the far from unimportant increase in the number of workmen employed by the company the aggregate amount paid away in wages in 1877-8 did not exceed 325,342*l.*, as compared with 324,960*l.* in 1876-7. Here we have probably the main secret of the success, or, at any rate, the comparative success, which attended the operations of the John Cockerill Company during its past financial year.

THE EDISON ELECTRIC LIGHT.

The great noise which had been made about the marvellous discovery of Mr. T. A. Edison in connection with electric illumination certainly led to the expectation of something better than was seen at the trial made on Thursday evening, at the Plough Yard Steam Works, near Bishopsgate Station, Shoreditch, by Messrs. William Ladd and Co., of Beak-street. It should be clearly stated that it was not pretended to be the new Edison light that was shown on Thursday evening, but it was admitted to be the same generator as Mr. Edison has adopted, and that the lamp agrees in principle with that from which Mr. Edison has promised so much; it is to be hoped, however, that this is not the case, as the trials on Thursday were, to use the mildest terms, not successful; and, compared with what has been seen both in Paris and in London within the past twelve months, lead to no other conclusion than that the inventions so loudly applauded are positively retrogressive. The failure on Thursday evening was the more disheartening as Mr. Ladd has long had the reputation of being able to make any philosophical experiment "go" if there be any "go" in it; and as in this case Messrs. Ladd and Co. have been appointed sole agents in Europe for supplying the machines to the public there was the greater inducement to use the utmost exertion.

The carbon plate lamp, for that is the name given to the apparatus shown on Thursday evening, does not produce a light in any way adapted for practical use, although it is possible it may be capable of improvement. But it is difficult to avoid the feeling that in its present form the old Serrin lamp in spite of its clockwork and complication is very far in advance of it. The Farmer-Wallace dynamo-electric machine, used for generating the electricity on Thursday evening, is so named in honour of its inventors—Prof. Farmer, of the United States Torpedo Department, and Mr. W. Wallace, a manufacturing electrician of Ansonia, Connecticut. In construction it resembles some of the earliest forms of the Gramme continuous current machine, but must not be confounded with the Gramme machine for producing alternating currents, which was rendered necessary for the utilisation of the famous Jablochkoff candle—employed to light the streets of Paris—and is also essential, in principle at least, in the Lontin system now used in the Strand.

The Farmer Wallace machine is duplex, and can, therefore, be used as two machines, giving two separate circuits, each circuit producing from one to five lights at the same time. It embodies the principle of putting into one circuit the field, the "armature," and the work; and by a certain device in the armiture the heating is reduced so much that it is said that the duplex machines have been run continuously day and night without injury. But against this assertion there is the awkward fact that on Thursday evening a 6-horse power engine, running with steam at 50 lbs. to the square inch, was required to keep five lamps going and giving the very brilliant light customary with electric lamps, interrupted by only periodical intervals of absolute darkness.

Even theoritically there seems to be no reason for preferring the carbon-plate lamp to the Jablochkoff candles, and assuming the carbon plates to give uninterrupted illumination. The carbon-plate lamp is simply two plates of carbon 11 in. long, 2½ in. wide, and from a quarter to half an inch thick, one of which is placed horizontally above the other. These correspond to the positive and negative rods of the ordinary lamps, with the difference that instead of being fixed at a point, the light moving continually along the line of separation. The two plates having come together, and thus, as the electrician says, "completed the circuit," they separate immediately by a simple automatic contrivance for about a quarter of an inch, and the brilliant light instantly bursts forth. As the carbon is gradually consumed where it burns the interval there necessarily increases, and since the light on a well-known principle always tends to concentrate where the interval between the two poles is at a minimum, it will be seen at once that it is always shifting.

When thus a length is to a certain extent eaten away, as it were, the upper plate drops, and the action already described is instantly repeated. The number of lamps on one circuit on the Jablochkoff system is usually four, but by a very simple arrangement of additional rings a single generater is made to supply more than one cir-

cuit. With the carbon plate lamps on Thursday five of them were shown on one circuit. The variations in the strength of the light, however, occasioned a considerable amount of flickering; when, for the instant, one of the lights disappeared every one of the others on the circuit also go out, of course, in like manner. These interruptions, however, were so instantaneous that unless the light was being watched but little inconvenience was felt. The carbons are stated to cost 2s. 6d. each, and a pair is estimated to burn 100 hours, which is less than two-thirds of 1d. per hour, whilst the Jablochkoff candle costs about 4d. per hour, or six times as much.

The Farmer-Wallace machine was, perhaps, placed at a disadvantage in being applied to such a very poor lamp as the carbon-plate, but although it is stated to be cheaper than others of like power, no sum could be named as its probable price, but it may be roughly estimated from the statements that its full power is equal to ten lights; that it requires a 10-horse engine to drive it, and that the cost of coal for the engine, carbons for the lamps, and the wages for one man will, it is thought, be 2d. per light per hour. On Thursday the machine itself worked smoothly, but there is evidently an enormous field for improvement in producing the electric light by means of it.

GAS SHARES AS AN INVESTMENT.

The movements in gas securities during the past 18 months have been of a very remarkable character. Rather more than a year ago lighting by electricity first began to have an important influence upon the prices of these securities. Previous to that time prices had reached a very high level, and the rate of interest realised by investors scarcely exceeded 4½ or 4¾ per cent. A sudden pressure upon the market amounting to almost a panic then ensued, owing to the attempts of holders to realise these securities to an extent which the market, being non-speculative, was unable to absorb. Prices in consequence fell from 15 to 20 per cent., and although there was afterwards a momentary rally, a declining tendency prevailed until about three months ago, when another severe relapse took place. Since then this department has been very depressed, and with the slightest pressure to sell prices have at once given way sharply. Within the past two or three days, moreover, advices from America stating that improvements had been effected in the electric light, by which it could be utilised for domestic purposes as well as on a large scale, have again alarmed investors, and the attempts to realise have not only produced a further very serious fall in prices, but have in fact rendered some issues almost unsaleable. Thus within the short space of less than two years there have been three successive panics, during each of which prices have fallen from 15 to 20 per cent., so that compared with the highest points touched in 1877 there is a fall, as seen below, of from 50 to 60 per cent. That the gas companies will ultimately lose the revenue derived from public lighting, and also from their larger and more important customers, seems possible, but that they will lose all or part of the receipts from domestic lighting immediately or in the course of a few years has yet to be proved, all statements which have yet been published as to cost, &c., having been rather vague and contradictory. At the same time, although much is yet uncertain, it seems quite plain that gas securities will never occupy the same high position which they once held. Annexed are figures showing the capitals of the more important undertakings, and also the highest price touched in 1877, compared with the prices at the commencement of the year, and to-day's closing quotations:—

	Amount of share.	Total Amount.	Total Capital.	Prices. Highest 1877.	Jan. 1, 1878.	Oct. 11, 1878.	Fall compared with 1877.
	£	£	£	£	£	£	£
Commercial	100	550,000	635,000	215	186	160	55
Continental Union	120	400,000	1,021,500	23	20	15	8
European	10	234,060	638,000	19	18	13	4
Gaslight and Coke	100	4,094,840	8,101,500	224	186	160	64
Ditto 10 per Cent. Pref. ...	100	665,000		235	205	193	42
Ditto H 7 per Cent.	100	1,300,000		155	137	115	40
Imperial Continent	100	2,800,000	2,800,000	220	182	155	65
London	100	286,500	866,000	216	186	160	56
Ditto First Pref.	100	180,000		143	133	115	28
Phœnix	20	540,000	2,014,378	45	38	33	12
Ditto capitalised	100	144,000		108	103	95	13
Ditto 7½ p. Ct. new max...	80	288,000		137	128	110	27
South Metropolitan	50	200,000	480,000	112	110	92	20
Surrey Consumers'...	10	150,000	290,000	22	18	15	7

NATIONAL PERMANENT RELIEF FUND FOR MINERS.

For more than a quarter of a century the enormous advantage that would be secured by the establishment of a National Permanent Relief Fund for Miners, as compared with the subscription to temporary funds resulting from spasmodic generosity excited by particular colliery calamities, has been pointed out in the *Mining Journal*, and since the donative mania which followed the Hartley accident took place the inconsistency of the charitably disposed in the matter of colliery accidents has been still more evident; indeed, the abuse of the Hartley fund probably did more to check benevolent contributions for the relief of casualties of this class than anything which has occurred before or since. The deaths resulting from accidents in and about mines may be put down at 100 per month, and were the amount annually given to relieve the sufferers by particular accidents applied to strengthen a general relief fund maintained by a contribution of 2d. per week from the colliers and 20 per cent. (the Northumberiand arrangement) on the miners' contributions from the coalowners, the sufferers by every accident would be well provided for, and much needless expenditure would be saved. This important question has again been raised—this time by Mr. ELLIS LEVER, of Manchester, whose name is so well known from his energy and perseverance that there is now a reasonable prospect of the suggestion being carried to success. Mr. LEVER considers that the fund raised from the colliers' twopences and the 20 per cent. paid by the coalowners thereon would be likely to be augmented by the same "rushes" as at the present time follow striking accidents, and more than all, that there would be accessions of income from legacies, such as are now left to the Life Boat Fund. He suggests that the trustees should be selected from amongst well known public men—members of either House of Parliament—and he thinks there would be no difficulty in getting together a central working committee whose names would be an equal guarantee to subscribers and recipients. Local committees, upon whom would, probably, devolve the duty of recommending the recipients and scale of relief to the London governors are, he says, almost ready to hand in every mining district in the United Kingdom.

That such a project as the formation of a National Permanent Relief Fund for miners is perfectly practicable cannot be doubted, and one great recommendation of it is that the benevolent are not asked to put their hands more deeply in their pockets than they voluntarily do at present; all that they are asked to do is to permit their benevolence to be distributed systematically instead of in the haphazard manner which is at present adopted. The proposition is not without a precedent, which has been tested. The poverty existing among the English Jews is certainly not less than in any other class of the community, and it was formerly the custom of the richer members—the ROTHSCHILDS, the MONTEFIORES, the COHENS, and others—to give very handsomely of their wealth to relieve the wants of their poorer brethren; but the squalid poverty continued until some 20 years ago when a few energetic young Israelites—the late MICHAEL HENRY, AARON LEVY GREEN, and LIONEL VAN OVEN being among the number—convinced the ROTHSCHILDS and the rest that the only remedy was to withhold their spasmodic benevolence altogether, and entrust the relief to one general board of benevolence, periodically appointed. The result has surpassed expectation; and although poverty amongst the Jewish community of course exists as before, it is speedily and thoroughly relieved, and the amount of resulting misery has been materially reduced. All that is required is a similar system of organisation for relieving the sufferers by colliery accidents To ensure success the benevolent should at once express their willingness to support the project; and as all offices connected with it should be strictly honorary, it would also facilitate matters if members of either House of Parliament would declare their willingness to act for one year if called upon to do so.

PITTAR'S DIAMOND BORER.—A portable diamond boring-machine has been recently introduced at the Ballacorkish Mines, Isle of Man, for the purpose of obtaining cores from various parts of the lode, thereby avoiding much of the time and cost incident to the making of short cross-cuts. In this respect the machine is likely to prove highly valuable and successful. Clear and distinct cores are obtained, showing the ore and veinstone composing the lode. The cost and time of boring a series of holes to prove a lode in this way are far less than that which would attend the making of cross-cuts. The machine is composed of a suitable boring tube and crown piece, an automatic feed arrangement, and hand driving gear. The whole of the apparates is very light, and is mounted on a stretcher bar in the ordinary way. Holes can be angled and drilled in any required direction. No matter what may be the character or hardness of the ground the tool is never thrown out of line by joints or openings, and will pass from one variety of stone to another without interruption to the rate of advance or to the boring movement.

EXPLOSIONS IN COLLIERIES.—Mr. W. Crawford, the secretary of the Durham Miners' Association, has issued a circular to the various mining bodies throughout the kingdom, calling a special conference to be held in Manchester on Dec. 16, for the purpose of considering the laws relating to mines, with a view of seeking from the Legislature some increased safety for working miners. Mr. Crawford says—"We need only name the terrible disasters of the last twelve months to show you the absolute necessity there is for some radical change in the law. During that year we have had Blantyre, where 200 lives were destroyed; following that came Haydock, with its 190 men and boys swept away; and lastly we have Abercarne, slaughtering no less than 270 of our fellow-men. You will thus see that in one year there have been, by only three disasters, no less than 660 lives sacrificed. And for all this havoc of human life no one has been or can be held in the slightest degree responsible. This in itself is sufficient to show the absolute need there is for a change in the existing law. In many of its parts the law is defective, and does not give to working miners that security which they have a right to expect. The conference is called for the special purpose of considering all laws affecting mines and miners.

GOVERNMENT INSPECTION, AND ITS RESULTS.—The assertion is constantly repeated that the governmental inspection of coal mines has been productive of no useful results, inasmuch as colliery accidents continue to occur, and many lives continue to be lost by them; but in the first place it must be remembered, as was pointed out by the late Mr. Matthias Dunn, that there is a constant annual increase in the danger attending the working of collieries owing to their becoming more extensive, deeper, and more subject to explosions from the greater extent of goaf; and secondly, the output of coal constantly increases at the rate of 5 per cent. per annum on the average, so that even had the number of deaths remained stationary there would still have been little to complain of. To a large number of persons, however, relative comparisons are not altogether intelligible, and nothing less than a statement of absolute diminution in the annual number of deaths is regarded as satisfactory. Such a comparison is given at one view in an admirably prepared coloured table forming part of the report of Mr. J. P. Baker, Her Majesty's Inspector for South Staffordshire and Worcestershire, and this may be assumed to show roughly the advantage and saving of life which has resulted from Government inspection generally. In 1851, when Government inspection commenced, 189 lives were lost in the collieries of the district over which Mr. Baker has now control. This was reduced by about 20 per cent. by the time he took control in 1860, the mean for 1859 and 1860 being 153. This very gratifying diminution has continued with very fair regularity until in 1876 and 1877 the deaths were but 80 in each year, being equal to a diminution of nearly 50 per cent. since he took control, and of nearly 60 per cent. since Government inspection commenced. The years 1876 and 1877 are not the most favourable years shown in the table, and 1871 was a calamitous year, the number having exceptionally risen again in that year to 109, but on the whole the decrease approaches a very satisfactory curve, and shows a very gratifying improvement.

THE SCOTCH IRON TRADE.—A Correspondent, writing from Glasgow on Thursday, says—The pig-iron market was excited to-day and prices again receded. It was stated in the ring that an iron manufacturing firm in Renfrewshire had suspended payment, and that a meeting of their creditors was held to-day. Their losses have, it is understood, been incurred through foreign contracts. It is anticipated, however, that they will be able to make arrangements with their creditors. The trade in the manufacture of pig-iron has become duller than ever. The firm of Merry and Cuninghame two days ago damped out their two furnaces at Glengarnock, and to-day they ordered another to be damped out. A malleable iron and coal firm in the Lanarkshire district was reported by name in a northen paper as having suspended payment. This statement is premature, as the firm has not found it necessary to issue circulars, and I believe that their assets show 30s. in 1*l*. I am glad to state that the negociations between the pig-iron makers and the railway companies and the mineral owners will in all probability result in a concession; that is, the leading lines will reduce their rates for coal and iron, and the mineral proprietors will lower their lordships upon the minerals brought to the surface. This will enable the Scotch iron manufacturers to compete with their Middlesborough rivals, who for some time back have been sending iron to Scotland cheaper than it can be made in this country.

MINING IN FRANCE.—In another column of the Journal we publish this week a report of Mr. John Lean, M.E., upon the Sentein Mines, situated in the French Pyrenees, and which he has recently visited. It would appear that these mines were opened some 24 years ago by French capitalists, and successfully worked down to the outbreak of the Franco-German war, when the miners were summoned to take their places in the French army, thus causing the suspension of all operations, which were not resumed at the close of the war, in consequence of the great age of the proprietor. It will be seen on reference to the report that the former owners extensively opened out the mines, and that great efforts were made, and no expense spared, to form a complete establishment for the economical reduction of their products. In July last, after Mr. Lean's visit, an English company was formed to take over and work the property; and, from the few men who have hitherto been employed in the extraction of ore, we find that the anticipations of the purchasers have been more than realised. As this, we believe, is the first venture of English capital in the French Pyrenees, we shall watch with considerable interest the development of the undertaking.

ELECTRIC LIGHT.—Referring to the alleged discovery of Mr. Edison for using an indefinite number of lamps on one circuit. Mr. J. Berger Spence writes:—Having spent a considerable part of the year in Paris, and being brought specially into contact with the various appliances for lighting in my capacity as juror in one branch of this subject at the Exhibition, I have not failed to be a keen observer of the electric light. Until recently my conclusions were certainly not in favour of its ever superseding gas, from its indivisibity, and, consequently, the impracticability of conveyance. Intelligence from America tells us that Edison has succeeded in this great achievement; but I think it right to state that Mr. Richard Werdermann is the first in the field, and to him is the credit due. The best testimony of this is that some weeks ago he had 10 lights from one circuit, and shortly he will have some hundreds. Having myself seen this new invention in practical operation, I have no hesitation in giving it as my opinion that electricity will now be a serious rival to gas. But even in the face of these facts, instead of gas shares being so recklessly thrown away, their value will be increased, as in my mind some method will be found to unite in the hands of the gas companies the two only means of giving light to the community—gas and electricity.

REPORT FROM CORNWALL.

Oct. 17.—The descent of the blow which was feared on the Monday before the date of our last report, and which it was hoped and believed had been averted, was unhappily not long delayed, and Friday brought what Monday had spared. As we stated last week, this result was almost wholly unexpected, nor is it easily to be accounted for if we had regard to the permanent conditions of the tin mining and trade only. Capt. Pryor's letter certainly does introduce some new features into the controversy with regard to the Tasmanian yield, but we fail to find in it anything which should prove of particular discouragement at the present juncture. Mining in Tasmania must be paid for and pay as well as here if it is to last, and clearly this it will not do at present prices, or anything like them. There is enough tin in Cornwall to supply the world unaided for a thousand years. It is not a question of the existence of the tin, but of what it will cost to bring into the market. And so it is with Tasmania and Australia, though with the differing conditions the margins are different.

It is very much to bs feared, however, that we are on the threshold of even more general commercial disasters than we have yet had, and that instead of panic or crisis in the ordinary fashion we are approaching a period of depression and disaster which in the time of the present generation has had no parallel, and which we can only match by the fearful reaction after the close of the great French war, or the crushing stagnation and suffering which ushered in the times of the first Reform Bill. It is not only Cornwall that is suffering; the whole nation is in the same predicament, and so far as our trade is concerned we almost appear to be approaching a period of national paralysis. Alike abroad and at home the outlook is black and dreary, and unless speedy relief is administered who can say what the more immediate consequences will be. They seem at present at any rate to defy forecast.

A recent visit to the mining districts of the North of Devon is not at all calculated to lead to encouragement. True it is stated that good discoveries of manganese have been made at Braunton, but it is a miserable sight to pass through Combe Martin, which ought to be one of the chief lead mining districts in the country, and to see here and there dotted about the rubbish heaps of abandoned mines. Combe Martin has hardly ever had a fair chance. The lodes have been merely scratched. But if adequate capital were forthcoming lead might to some extent make up for tin. The more we can spread our operations just now the better.

The idea of reducing the "output" by agreement, as we pointed out last week, is out of the question as a remedy for the present state of things. It would be hopeless even if there were no general depression. It would be utterly suicidal, for it would simply give our rivals an opportunity of stepping in and beating us farther back. If Cornwall retained its old monopoly, or if all the tin mining districts of the world came to such an agreement, the thing might be done, but the if in either case is insuperable, and the writer in the Spectator who started the idea wrote in utter ignorance of the true conditions of the trade. Unless our general trade speedily revives and increases the demand the only way in which the controversy between home tin and foreign can be settled is by the battle being fought out until one of the two parties is exhausted. The prospect is not pleasant, but it is best to face it fairly and frankly.

REPORT FROM THE FOREST OF DEAN.

Oct. 17.—We are pleased to report that the demand for house coal continues very much at its improved aspect, and that, consequently, the demand for labour is fair at the principal pits. Excepting two or three cases, the works in West Dean are still silent, and, we fear, are likely to remain so, as far as appearances enable us to judge. Emigration and migration have relieved the pressure of distress; but much suffering, we fear, will again be felt this coming winter, as farmwork round the Forest borders, which has employed numbers during the summer, will have been exhausted, except for the ordinary complement of men. This aspect of local affairs, coupled with the fact that Foresters, as a rule, cling with affection to their native hills and dales, adds to the prospects of employers, in counting upon the men being retained by them, supposing that the workers have fair play and wages. At present, however, men complain that, although trade has improved and labour has become more abundant, they are unable, as a rule, to earn from ten to fifteen shillings per week; and were it not for the fact that provisions are in the main tolerably cheap the pinch would be rather severely felt in the family. But, without more ample data, we should not feel justified in attempting to point out remedies, and, therefore, pass on to other matters.

We regret that little can be said as to improvement in the Iron Trade, and the forges and tin-plate works cannot be reported other than unsatisfactory. A good deal of complaint has for some time been expressed by the people living adjacent to the sewage outfall—they affirm that noxious gases are very offensive night and morning, being retained near the earth by fog or dew. It is evidently a difficulty that puzzles the sanitary authorities to deal with, and it is likely that the evil will lead to some litigation ere long, unless an attempt be made to mitigate the nuisance at least. The philosophy of dealing with sewage appears to be yet in its infancy, for there is scarcely a town that can report satisfactorily respecting it.

Prices remain much as they have been for some time past, although we are arrived at the season when it is usual to readjust them. We think, however, that the proprietors will do well to let quotations remain stationary, at least for the present.

REPORT FROM MONMOUTHSHIRE AND SOUTH WALES.

Oct. 17.—The enquiry at Abercarn was re-opened to-day, but no evidence was taken, for the simple reason that none, at least of a scientific nature, could be given. A letter was read from the Government Inspector for the district, Mr. Thomas Cadman, recommending an adjournment for at least four weeks. The men intend to be represented by a barrister, as one of the London papers has insinuated that by their carelessness the accident was caused. An adjournment was made to Nov. 18. To Mr. G. Wilkinson, of Aberdare, a very handsome testimonial has just been presented. The officials and proprietors of the Powell Duffryn Company and the Cwmaman and Lletty Shenkin Colliery Company and other friends have given him a splendid drawing-room clock, a candelabra and vases, and a watch and chain. The Great Western Railway Company have set earnestly to work to improve the approach to the Briton Ferry Docks by dredging out the mud. The position of the Iron Trade has but little altered. At one or two of the works there is a fair amount of business doing, but this is by no means the rule. In fact, trade was never duller than it is now. The demand for rails is quiet, and when orders are secured they are at such prices as to leave in most, if not all, cases no margin for profit. As for bar there is a moderately good enquiry, but here, again, prices are at their lowest. The pig-iron department is rather dull. Clearances have been about up to the average. There has been a good demand for steel rails of late, and this continues. In fact, they are becoming an important item in the staple products of the country. At Landore works there are some fair orders shortly expected. As for tin-plates, the demand has a trifle improved, but prices show no alteration.

As for coal, the demand is certainly not quite so good. The request on foreign account is pretty well kept up, but there is unfortunately no improvement to note in prices. The collieries are irregularly employed, some being in full work, others only just on the move, and the output is still large. House coals are in rather better demand; prices are not quite so firm. The patent fuel department is dull, but slightly altered for the better.

During last month Cardiff shipped 5680 tons of iron, compared

with 9020 tons in September, 1877; Newport, 5841, compared with 3527 tons; and Swansea, 210, against 152 tons. The coal cleared foreign in the same periods was—From Cardiff, 332,604 tons, against 299,119 tons; Newport, 71,647, against 42,115 tons; Swansea, 48,711, against 52,909 tons; and Llanelly, 4838, against 3144 tons. Coastwise clearances were—Cardiff, 65,372, compared with 79,041 tons; Newport, 74,954, against 76,065 tons; Swansea, 18,669, against 24,092 tons; and Llanelly, 11,849, against 10,951 tons.

It is stated that the Penclawdd Lead and Silver Works, near Swansea, have been recently purchased by Mr. Kirkwood, deputy-chairman of the Llanelly Railway and Dock Company, and it is his intention, in partnership with other gentlemen, to work the same forthwith. The works are substantially built, practically laid out and extensive, and capable of smelting large quantities of silver-lead ore. There is also a capital rolling mill, reckoned to be one of the best in the kingdom for the manufacture of sheet-lead. This intelligence must be received by many lead miners as a good omen, and that a fresh competitor for their ores comes at a welcome time.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Oct. 17.—Very little change has taken place in the state of trade since my last notice so far as Derbyshire is concerned, but the last quarter of the year has certainly improved several of our mining districts. The few lead mines from which ore to any appreciable extent is being raised continue to work very well, and there is every probability that with the extension being made for the purpose of development that the New Year will usher in a still better state of things. Large quantities of ironstone continue to be imported from Northamptonshire, comparatively little attention being paid to the home resources, the former no doubt being equally as economical. Derbyshire pig has been quoted very low of late, and the rates certainly are not sufficient to leave any margin of profit, but a better state of things is looked forward to, for the lowest point has surely been reached. A good deal of our iron has been sent into Sheffield and the district, and the slackness in such places tells seriously on the consumption. Hematite iron is now in the best request, owing to the activity which prevails in the Bessemer departments, but unfortunately the ore from which it is produced is not found in the county, otherwise we should have more furnaces in blast. At Wilson and Cammell's, at Dronfield, there has been no falling off in the production of steel rails, but the adjoining works are still quiet. House coal is now going off more freely, so that the colliers are better off than they have been during the previous part of the year. To London a considerable increase has taken place from Clay Cross and other leading collieries *via* the Midland, whilst a good deal is also being put on to other lines. The merchants in the Metropolis have made of late an advance of 2s. per ton over the summer prices, but the colliery-owners have not participated in it, unless of late to a very small extent indeed, and that not in all cases. This shows the necessity that exists for the owners of coal mines having more control over the sales to consumers, so that all the advantage shall not accrue to those who are not directly connected with the pits that during the summer at least were worked at a loss. In steam coal there has only been a moderate business done of late, and the same may be said with respect to all descriptions of small coal.

In Sheffield quietness still continues in most branches, and the last quarter of the year promises to be a particularly dull one, for many of the workmen are not fully employed. The armour-plate mills that a short time since were rather busy on Government orders have become considerably less active, for the orders in hand are now being completed. For the present it would appear that steel-plates for armour purposes are in abeyance, but experiments are still being made by different firms for the purpose of making a quality of steel that will stand the Admiralty test, for iron plates will become things of the past. Ordinary plates have been in fair request, the failure of the bank at Glasgow so far not having effected any of our manfacturers, but no doubt orders will for some time come in more sparingly, whilst makers will be induced to act with greater caution. Steel plates for boilers are getting in better request, but cast steel generally is quiet, except for certain specialities. Bessemer rails appear to be as active as ever, and all the makers have plenty to do, some considerable orders being in hand, not only for home railways, but for those on the Continent as well. Stoves, grates, and ornamental castings are not in such request as they have been, nor is there so much doing in heavy castings. In table and other cutlery business is still slack, the home markets being quiet, but Australia and Canada have been taking a fair quantity of our goods. The dispute at Nunnery Colliery has been terminated, and the award of Mr. Alderman Moore acted upon. A short time since several of our working men were supplied with funds to visit the Paris Exhibition, and to report with respect to those branches of the trade they are connected with. They have now returned, and their reports are looked forward to with some interest, and they are likely to show to our own men that foreigners are not so far behind us as is generally supposed.

In South Yorkshire the coal mines are now working better than for some months previously, although there is still many men on strike. The number, however, has diminished, for the dispute at Woolley, after lasting some 16 or 17 weeks, has been settled, although it was only two or three weeks since many of them were ejected from their houses. They will, however, now return to them, so that the place will not have the deserted appearance it has had. At Manvers Main several meetings have taken place between the chief manager and the representatives of the men with a view to coming to a settlement, but not as yet with success. The matter in dispute, however, has been minimised, and before long no doubt an arrangement will be come to. A few men are out at Wharncliffe Silkstone, where it has been found that the Parkgate seam could not be worked at the prices paid unless at a serious loss, and this led to its being closed. The London trade is still hampered by the railway rate, and the colliery owners do not see how the proposal to carry the coal by water *via* Lincoln and Boston Deeps could be accomplished. It is entirely out of the question the putting of coal into sacks at the collieries, as it could not be done. Perhaps if this part of the plan were left out the remainder would meet with more consideration on the part of our colliery owners, who would only be too glad to adopt any system of a practical character that would make them less dependent on the Great Northern for reaching the London market.

We last week recorded the death of Mr. J. T. Woodhouse, mining and civil engineer, of Derby. Mr. Woodhouse was widely known and much respected throughout the county, and particularly among those connected with the mining interests. The funeral took place at Netherseal Church, near Burton-on-Trent, on Friday. Mr. Abney Hastings was unable to be present at the funeral, being in Scotland, but was reprented by his eldest son, the Earl of Loudoun. The pall bearers were the Earl of Loudoun, Major Mowbray, Messrs. F. C. Gillett and Thomas Carrington, and among those present were—Messrs. C. R. P. Moorewood, Alfreton Hall; H. E. Smith, Norris Hill; Mr. Gratton and Mr. Johnson, Midland Railway; Mr. Evans, Inspector of Mines; Mr. George Wooley, Butterly Company; Mr. J. P. Jackson, Clay Cross Company; Rev. J. Gresley; Rev. J. Denton; Mr. Poymoore, Swanwick; Mr. Mellership; Mr. Cooper; Messrs. George and John Fowler; Mr. Blizard; Mr. Jeffcock, and many local and Derby gentlemen.

By order of the Admiralty an armour-plate, supplied by Messrs. Cammell, of Sheffield, has been officially tested on board the Nettle target ship in Portsmouth Harbour. The plate was 12 feet long by 3 feet wide, 11 inches thick, and weighed about 8 tons, being of the approximate value of 500*l.*, exclusive of the cost of placing it in position, amounting to another 100*l.* It was fixed to a transverse wood bulkhead, built from a vertical and two horizontal layers of oak baulks, making in all 3 feet 6 inches in thickness, the whole being shored by substantial wooden spalls, secured by a massive thwartship. The gun used was a 12 ton 9 inch muzzle loading rifle. Four shots were fired, the impact forming a square in the centre of the plate at the right hand corner, the shots being aimed at marks in comparatively close juxtaposition. The first projectile penetrated 6 inches, the second 7¼ inches, and the two others 7 inches. None of them, however, occasioned any fissures of importance, and the plate was regarded as standing the severe test satisfactorily. The experiment was conducted by Captain Herbert, of H.M. gunnery ship Excellent, in the presence of a representative of the firm which supplied the plate.

Extraordinary Sale of Gas Shares.—Mr. Joseph King sold by auction a number of shares in the Malton Gas Light and Coke Company. There was a large attendance, and it was expected that prices would fall, but to the surprise of all bidding was very brisk, and higher prices were fetched than were ever given before in Malton at a public sale. Mr. King first offered five original shares of 10*l.* each, all paid. They were started at 12*l.* each, and went up to 20*l.* 5s. per share, at which they were sold to Mr. T. Ineson, tinner, Malton. The next lot consisted of 20 new shares, 10*l.* each, of which only 2*l.* 10s. is paid up. Starting at 2*l.* 15s. these ran quickly up to 5*l.* 7s. 6d. each, the purchaser being Mr. R. Yates, Malton.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Oct. 17.—The new business which has resulted from the holding of the Quarterly Meetings is unsatisfactory. Few makers either of pig or finished iron have been able to book orders of magnitude. The customary quarterly contracts have been generally placed, but in some cases even these have been curtailed to a month ahead. High-class Staffordshire pigs fail to secure sales even at 3*l.* 10s. per ton, and Messrs. Henry Ward, who produce this class of iron, have decided to shortly put out the one furnace which they are now working. The question of a reduction in blast-furnacemen's wages is being debated by a few makers, but this description of labour is already at such a low point as regards remuneration that the majority of the trade discountenance any drop. The market for medium and common finished iron is this week decidedly easier by reason of Mr. J. Chamberlain, M.P., having awarded a 5 per cent. drop in wages.

At a private meeting of coalmasters at Dudley on Monday, presided over by Mr. E. Fisher Smith, agent of the Earl of Dudley, the matter of colliers' hours and wages was partly discussed, with the result that it was resolved that the men's delegates should be communicated with in view of a joint conference of masters and men at an early day.

On Wednesday in Wolverhampton the third quarterly meeting of the South Staffordshire and East Worcestershire Mining Accident Fund was held. Attention was called to a resolution passed at a recent conference of miners at Tipton setting forth that the men ought to have more than the present number—three—of representatives on the committee. It was resolved by the committee that when the miners should have doubled the present total of the fund (3300*l.*) then the number of their representatives should be doubled. At present it was thought that they were fully represented. The first distribution out of the half-yearly interest of the fund to the widows of colliers killed during the previous quarter took place. One widow was awarded 3*l.*, and three others each 4*l.* Eight applications had to be refused in consequence of their being out of the province of the committee.

Another chart—this time of the average prices of common melting pig-iron during the last 36 years—has just been issued by Mr. Walter E. Wood, of Stourbridge. The table shows the average not only of each year, but of each cycle of years (12), so as to illustrate the law governing the price of pig-iron. It appears that though the market value of pigs has fluctuated very widely—from 5*l.* 6s. 3d. in 1872 to 2*l.* 8s. 9d. last year—yet it ebbs and flows with sufficient regularity to keep the average of each cycle within 2s. of the same amount.

The underground flood in the Bilston district has not yet ceased its mischievous work. Just recently the colliery at Spring Vale of Messrs. J. and T. Williams, of Parkfield, has been drowned out through the stoppage of the pumps of two neighbouring colliery owners, and a pit belonging to Messrs. Bradley has also succumbed to the evil.

The creditors of Joseph Jewkes, iron merchant, Wolverhampton, on Monday refused a secured composition offer of 2s. 6d. in the pound, and resolved upon bankruptcy. The total liabilities were 6100*l.*, and the available assets 683*l.* The debtor had been insolvent ever since 1874. From certainly the commencement of 1877 he had made a practice of selling iron (mainly nail sheets) at from 2s. 6d. up to 25s. per ton less than he engaged to give for them.

Mr. William Hibell, trading as William Hibell and Co., an important firm of iron wire drawers in Birmingham, has petitioned in liquidation, with liabilities estimated at 16,000*l.* and assets at 7000*l.*

Slightly more is doing in North Staffordshire than at the date of my last as the outcome of the Wolverhampton and Birmingham Quarterly Meetings.

REPORT FROM NORTH WALES, SALOP, AND CARDIGAN.

Oct. 17.—Some interesting and very successful experiments were made with Lithofracteur at the Berwyn Phosphate Mine, near Llangynog, on Tuesday and Wednesday, the 8th and 9th instant. The experiments were conducted by Mr. McKie, for Messrs. Vivian and Co., the agents for Wales, in the presence of Mr. D. C. Davies, F.G.S., of Oswestry, and Capt. J. B. Evans, of Llangynog, either of whom will certify the correctness of this report. It should be explained that the phosphate occurs in a bed 10 in. to 15 in. thick, which is covered by tough shale above, and is underlain by hard compact beds of limestone below. The whole of the beds are perched up at an angle of about 75° from the horizon. There is a thin but undulating parting between the phosphate bed and the first bed of limestone and under the fifth bed of limestone. At about 4 ft. or 5 ft. below the phosphate there is a thin shale bed, in which the miners have been used to hole, in order to blow down the whole of the intervening limestone beds before the phosphate could be got.

The object of the experiments was to see whether by the use of a strong explosive a sufficient width of limestone could not be blown down more quickly and cheaply, and so render the working of the phosphate less costly.

A level some 200 yards long has been driven along the bed into the hill, and the phosphate is stoped down above it.

The first hole was driven in the face of this level—it was 3 ft. deep. It started about 3 ft. 6 in. from bottom of the level, with a downward direction. It was driven in very tight ground, about 2 ft. 6 in. from the bottom shale. It was charged with 10½ ozs. of the explosive. The shot blew out the 2 ft. 6 in. of rock down to the shale, and struck forward beyond the bottom of the hole, clearing the ground to the floor of the level, and upwards to a joint 3 ft. 6 in. above the hole.

The second hole had been drilled in the face of one of the stopes. It was driven in solid limestone. The hole was placed 4 ft. 6 in. above the under face of the stope, and it penetrated limestone 3 ft. This hole was charged with 12 ozs. of lithofracteur. The whole mass of the limestone, 3 ft. wide, 4 ft. 6 in. deep at the face, and from the end of the hole irregularly downwards to a total distance of 6 ft. 6 in., was detached and broken so that it was worked down with a pick.

The third hole was in the same limestone bed in another stope. It was started 2 ft. 9 in. from the under side of the stope, and driven slanting upwards to a depth of 3 feet. This direction, with the downward direction of the under face of the stope, gave 4 ft. depth from the end of the hole to the under face. The hole was charged with 12 ozs. lithofracteur, and the whole mass came down bodily.

The fourth hole was driven in the phosphate bed itself, tightly held between the shale above and the limestone below. It was driven 2 ft. 6 in. deep, and charged with 8½ ozs. of lithofracteur. The phosphate bed was all brought out to an extent of 3 ft. by 3 ft. The holes were all 1 in. diameter. Two more holes, 2 ft. 6 in. deep, were driven in the face of the level, and charged—one with 8½ ozs., and the other with 11½ ozs. of lithofracteur. The results were very powerful in each case. Altogether the experiments were very successful, and indicate a step forward in the efforts that are being made after cheaper mining.

The miners laughed at the idea of shifting the masses of rock intended to be moved, and the results astonished them.

The Shipping Trade of North Wales generally is in a very dull unsatisfactory state. About 20 ship carpenters were discharged from Ports Dinorwic and Carnarvon last week. Freights cannot be got. The loading places of the Penmaen Mawr sett stone and the Llysfaen limestone quarries show no sign of life at all.

I commend the geological features of some of the reports of recently started Flintshire and Denbighshire lead enterprises to the study of the Fellows of the Geological Society.

TRADE OF THE TYNE AND WEAR.

Oct. 9.—There is little new to report in connection with the coal and other trades. The steam coal trade gets weaker as the foreign shipping season advances, and best steam coal can now be had at 9s. per ton. The large new steam coal works at Dinnington have been stopped. These works were opened seven years ago, and about 350 workmen were employed. The plant and workmen's houses are all first-class modern erections. It is not likely that this important work will be entirely closed, as the men have agreed to accept a reduction of 10 per cent. on the hewing prices, and this, with other reductions, may induce the owners to try once more to work the place with advantage. The Killingworth Colliery is also to be stopped, the men having got notice to this effect. This is one of the oldest coal mines on the Tyne, where the famous High Main seam was found in great perfection. It was here that George Stephenson commenced his career as an engineer, as he was first employed at these works as an engine-man, and the pumping engine having failed to keep the works clear of water he conceived the idea that he could effect some improvements in the engine, and on mentioning this to Mr. Dodd, the viewer at that time, he was allowed to make what alteration he could effect, and the result was the engine was much improved, and the works were cleared of water. This was the first step achieved by Stephenson, and his subsequent career is well known. He also often went into the coal workings here and made experiments at blowers of gas, which were very numerous, and the result was the invention of his safety-lamp. Mr. Nicholas Wood was at the time alluded to an apprentice viewer at these works, and much of his experience was gained here. The house occupied by Stephenson is still occupied by the engineer of the colliery, and a sun-dial is to be seen in the front which was put up by this extraordinary man.

At many works lately private arrangements have been made between the masters and the men respecting tonnage rates, &c., without having recourse to the joint committees or Union officials, and there is no doubt that this is an advantage, so far as details are concerned, as these are best understood by the parties interested; and there is another point, the adjustment of petty disputes by means of joint committees and arbitrators entails often a very considerable expense on both masters and workmen. That there is a disposition to shake off, to some extent, the authority of the Union is palpable enough, and this is only natural, as the interferences of the Union officials with every petty detail of businss which occurs between masters and men long since became an intolerable burden; yet we do not suppose that the entire dissolution of the Union would prove an unmixed good. The organisation, without doubt, is useful in some respects, and it has a tendency to prevent local strikes, which in former times occurred without any serious adequate cause. The men are now convinced that the combination which they hoped would secure them large pay for short time has no power to prevent the action of free trade, or counteract the laws of demand and supply, and they are now submitting to new prices and arrangements, which will enable the masters to compete with the coalmasters in other districts, and thus prevent the collapse or decline of the coal trade in the district.

At the Tyne dock shipments are active, as there is a good demand for gas coal, and the house coal trade is improving, prices having advanced 6d. per ton this week. At Rainton and other places on the Wear the colliers are fully employed, and on the whole the colliers in Durham may be said to be fairly employed, and there is some prospect of work for the winter months.

A movement has again been made by the iron and coal masters in this district to get if possible a further reduction in the railway rates charged by the North-Eastern Railway Company. The directors of this company were waited upon on Friday by a deputation sent for this purpose. Three years ago this company granted a rebate of 7½ per cent. upon the rates of carriage on iron-making materials. One of the requests of the deputation was that a further reduction of 7½ per cent. be made. It was pointed out that the selling price of pig-iron had fallen since 1875 nearly 30 per cent. During the interview many points of great importance to the staple industry of Cleveland were amicably discussed, and the directors promised careful consideration of the points put before them.

A general meeting of the Durham Miners' Association was held at Durham on Friday. The main object was to reduce the payments to members who are unable to obtain employment. After a short discussion it was resolved to reduce the payments of those members to the amount originally paid in 1870. The Executive Committee of the Association has also issued a circular stating that a large number of men have left the society, and urging the present members to use every moral means in their power ty bring those men again into the organisation.

Matters at the Tow Law Ironworks, which are owned by the Weardale Iron and Coal Company (Limited), are now beginning to look duller than ever; one of the furnaces has been blown out, which will necessitate the dismissal of 30 workmen. Amongst those under notice are several men who have been in the company's employment for several years. Only one furnace now remains in blast, and the whole of the men employed at this furnace have submitted to a reduction of 10 per cent. The mechanics have received 14 days' notice, and after that period they will be subject to dismissal with one day's notice. The foundry, which is a very extensive one, has been entirely closed.

Lead mining in the Alston Moor district is exceedingly gloomy; several mines are being abandoned altogether, and at others the number of men employed is being seriously reduced. At Cashwell, were a short time ago 40 or 50 hands were employed, the number has been reduced to half-a-dozen. It is stated that 50 men have been discharged at Nenthead, and 13 at Gairigill. The number of men employed in the Teesdale Mines has been considerably reduced, and the prospect throughout the entire neighbourhood is anything but encouraging.

The market at Middlesborough on Tuesday was extremely dull, and business largely at a discount. Merchants were offering iron at extraordinary low figures, and were ready they affirmed to do business at 37s., No. 3. A few sales forward have been made at these rates. Makers, however, are generally quoting their old figures, and abstaining from operations until the market is more settled. Makers ask 38s. to 38s. 6d. for No. 3, and 6d. to 9d. less per ton for forge. Most buyers and sellers are waiting results in the present state of things. The shipments of pig metal have been briskly maintained. Even to Scotland, where it was feared that there would be a sensible falling off owing to the commercial disorganisation prevailing, the deliveries of Cleveland iron last week an average being about 6000 tons. This is cause for encouragement as showing that the relations between the two districts have not been materially disturbed. The only fear that Cleveland producers have is that Scotch iron may keep at so low a figure as to prevent the use of so much Cleveland iron as usual, or that sales of stock in Scotland—and there is a large quantity of iron in stock—may seriously depreciate values. There are movements being made in Cleveland to extend the manufacture of steel in the projection and opening of small works in addition to the large operations Messrs. Bolckow, Vaughan, and Co. have in progress. The manufactured iron trade remains, on the whole, very quiet; as regards new work manufacturers of plates are generally pretty steadily engaged in executing orders they have for some time had in hand, and bar makers are not apparently worse off for work. Plates are showing scarcely so much firmness, and 6*l.* has been heard of as been taken in some cases. Bars are 5*l.* 10s.; angles, 5*l.* 10s. to 5*l.* 17s. 6d. The iron and mining trades of Cleveland are seeking to obtain concessions from the North-Eastern Railway Company in regard to dues charged on minerals.

Mr. Wm. Crawford, secretary to the Miners' National Union, has

issued a circular calling attention to the special conference of miners to held in Manchester, on Monday, Dec. 15, and the two or three following days, for the purpose of considering the laws relating to mines, with a view of seeking from the Legislature some increased safety for working miners. A desire is expressed that the meeting should be of a really representative character, and that some should be present to speak in the name of and for every class and district of miners in the United Kingdom. The following questions are requested to be answered on or before Monday, the 21st:—1. Is it either certain or probable that you will be represented at this Conference?—2. If you are either certain to be, or probably may be, represented at the Conference have you any question affecting working men, and especially working miners, which you would like to appear on the programme for the purpose of being considered?

At the North of England Institute of Mining and Mechanical Engineers meeting at Newcastle, the President (Mr. G. C. Greenwell) in the chair, Prof. A. Freire-Marreco exhibited and described a recording water-guage for pit purposes, which shows the maximum and minimum tension over any particular period. The members expressed the opinion that the guage would be of very great use not only for mechanical ventilation but also for the furnace, and would prove a most valuable adjunct to the register of currents of air. Mr. D. P. Morison exhibited a drawing of the Rigg and Meiklejon coal-cutting machine, and read some notes descriptive of the apparatus and of the work effected by it. He said the machine was particularly adapted to working in thin seams. It is at work in Penston Colliery, near Hamilton (one of Messrs. Dean and Moore's collieries). The price paid for hand-hewing there is 3s. per ton, and the total cost of labour by the machine, that was for three men and a boy, but exclusive of compressed air or wear and tear of machinery, was 3d. a ton. The machine got out 150 yards in a shift, which in that thickness of seam represented somewhere about 100 tons in the nine-hours shift, and it would take 50 men to do the same work. The weight of the machine is 25 cwts. A vote of thanks was given to Mr. T. Lindsay Galloway for his paper on the present condition of mining in some of the principal coal producing districts of the continent.

THE INSTITUTION OF COLLIERY ENGINEERS.—A general meeting of the North of England Institution of colliery engineers was held, on Saturday, at the Literary and Philosophical Society, Newcastle, the President (Mr. Hair) in the chair. Mr. T. J. Dawson exhibited a model of Schmidt's spiral screen, which he said was a German patent, and could be used for screening ores or coal. He explained the model, and said the idea of the patentee had been taken from the inclined screen in the first instance, and by its means coals could be screened into as many sizes as necessary. Six screen were already in use in Germany for screening ores and coal, and satisfactory results had been obtained, but it had not yet been introduced into England. The patentee claimed the following advantages for his machine:—That the first cost was less than that of the ordinary screens, that the motive-power required was considerably less than required for ordinary screens. All parts could be easily taken out or replaced, and the minimum of wear and tear. A spiral screen 6 ft. 9 in. diameter and 4 ft. wide, which would separate into four classes 500 tons of coal in 10 hours, cost 70*l.* to 80*l.* in Germany. A long discussion took place on the subject, and Mr. Dawson promised to give further information at the next meeting.

COAL MINES REGULATION ACT, 1872.

EXAMINATION FOR MANAGERS' CERTIFICATES OF COMPETENCY.

DISTRICT UNDER THE CHARGE OF WILLIAM ALEXANDER, ESQ., H.M. INSPECTOR OF MINES.

NOTICE IS HEREBY GIVEN, that an EXAMINATION for MANAGERS' CERTIFICATES OF COMPETENCY, under the above-named Act, will be HELD on the 29th and 30th days of November, 1878, and CANDIDATES INTENDING TO PRESENT THEMSELVES at such Examination must, on or before the 16th day of November, notify such intention to the Secretary of the Board of the above-mentioned District, from whom all information as to particulars can be obtained.

By order of the Board,
C. MACPHERSON, Secretary.

135, St. Vincent-street, Glasgow.

N.B.—Persons who do not reside within the District are equally eligible for examination with those who do.

£10 REWARD.—I, CHARLES T. GILBERT, of the PHŒNIX BLUE BRICK AND TILE WORKS, Hingston Down, Gunnislake, Calstock, proprietor of a Patent granted to FREDERICK ARTHUR COWELL, of Gunnislake, Calstock, in the county of Cornwall, for the INVENTION of IMPROVED NON-POROUS and VITRIFIED BLOCKS, BRICKS, and other articles for various purposes, the said articles being manufactured from either or both the rocks known in the counties of Devon and Cornwall by the names of "killas" or "elvan," hereby give notice I will pay the above reward to any person or persons giving such information to my undersigned solicitor as will lead to the conviction of any person or persons INFRINGING the RIGHTS of the said PATENT. (Signed) CHAS. T. GILBERT.

Witness—CHRISTR. V. BRIDGMAN, Solicitor, Tavistock.

Dated this 3rd or September, 1878.

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(LIMITED),

HALKIN MOUNTAIN, FLINTSHIRE.

Capital £10,000, in 2000 Shares of £5 each, fully paid.

MESSRS. THOMAS BROTHERS, Strand Chambers, Strand Street, Liverpool, have much satisfaction in being able to offer for public subscription a limited number of shares in this company, at par, and believe that a careful perusal of the following particulars will justify the feeling, and convince the reader that it would be difficult to find a more favourable medium for the investment of a moderate amount of capital.

Trellynia Mine lies in the centre of a highly mineralised district, and is surrounded by well known and dividend paying mines. Being only 1½ mile from Bannerch Station on the Mold and Denbigh Railway it is very accessible for investors who like to visit the properties in which they put their money.

Considerable quantities of lead ore were raised by former workers from a series of shallow pits sunk on the outcrop of the various lodes; the present company has cleared up and extended the old workings and sunk a new shaft to a depth of 80 yards, in the carrying out of which work many tons of lead ore (as much as 30 tons in a month) have been brought to surface and sold.

Trellynia is the focus or concentrating point of a number of well known lodes running through two of the adjacent mines, and as such junctions are invariably very productive, it is only reasonable to expect a large body of ore will be found when the new works reach the point of intersection of the lodes.

The bottom of the mine being more productive than the shallow levels and pits, and there being many indications of increased richness as further depth is attained, it has been decided to sink the shaft below the 60 yard level and drive in the direction of the junction of lodes; to do this advantageously improved winding apparatus is required, and to provide it the shares now offered have been issued.

Trellynia is not a new or purely speculative mine, nor is it an abandoned mine, the working of which can only be resumed at great cost; but it is a fairly remunerative undertaking, needing only a little further capital to make it a great success.

During many years experience in mines, mining companies, and other industrial ventures, Messrs. THOMAS BROTHERS scarcely remember a more favourable opportunity for a small, permanent, and profitable investment, and, therefore, confidently recommend it to your serious consideration.

Applications for shares should be made to us without delay, from whom also any further information can be obtained.

THOMAS BROTHERS,
STRAND CHAMBERS, 5, STRAND STREET, LIVERPOOL.

In the High Court of Justice—Chancery Division.

FORSTER v. FORSTER.

IMPORTANT AND VALUABLE COLLIERIES AND LIMESTONE QUARRIES FOR SALE.

IN PURSUANCE of an Order of His Lordship the Master of the Rolls, TENDERS are INVITED for the PURCHASE, in One Lot, of the IMPORTANT LEASEHOLD SEASALE COLLIERIES, called EAST HETTON COLLIERY, comprising 2740 acres or thereabouts; and TRIMDON GRANGE COLLIERY, comprising 854 acres or thereabouts; also, the adjacent VALUABLE RAISBY HILL LIMESTONE QUARRIES and LIME WORKS (principally leasehold, but partly freehold); also, a FREEHOLD ESTATE and LANDS, comprising about 144 acres, all situate near Hartlepool, in the county of Durham, together with the COLLIERY PLANT of PITS, ENGINES, engine-houses, locomotives, machinery, railways, screens, stores, materials, live and dead stock, coke ovens, agents' and workmen's houses, workshops, stables, granaries, quarry stock and chattels.

The collieries are in connection with the Hartlepool branch of the North-Eastern Railway Company's system, being respectively within 14 and 10½ miles of the port of Hartlepool, and 16 and 12¾ miles of West Hartlepool, and are also in connection with the main line at Ferry-hill, from which they are respectively five and six miles distant, and are thus well situate for sending their produce to the southern markets, to the Tyne, Sunderland, Middlesborough, and Cleveland, or over sea.

The quarries are in full operation, and the limestone is well known in the market, and is now extensively used in some of the largest ironworks in this district and in Cleveland, and is also largely used for chemical purposes, and the proximity of the works to the North-Eastern Railway facilitates the delivery of large quantities at all times with the utmost promptitude and regularity.

Tenders to be sent (in a sealed cover, marked in the corner "Forster v. Forster") to CHARLES BURNEY, Esquire, the Chief Clerk of His Lordship the Master of the Rolls, at his chambers, No. 10, Chancery-lane, London, on or before the 31st day of October, 1878.

Particulars, plans, conditions of sale, and forms of tender, may be obtained on application to Messrs. TRINDERS and CURTIS HAYWARD, Solicitors, 4, Bishopsgate-street Within, E.C.; T. W. DENDY, Esq., 8, Frederick's-place, Old Jewry, E.C.; J. ANDERSON ROSE, Esq., 11, Salisbury-street, Strand, W.C.; G. B. FORSTER, Esq., Backworth, Newcastle-on Tyne; W. O. WOOD, Esq. (the Viewer), East Hetton Colliery, Coxhoe, County Durham; MATTHEW FORSTER, Esq. (the Receiver), 1, Doctor Johnson's-buildings, Temple, E.C.; and R. F. MATTHEWS, Esq., Seaton Carew, West Hartlepool.

Orders to view can be obtained by written application to Messrs. TRINDERS and CURTIS HAYWARD, or G. B. FORSTER, Esq.

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THE LIQUIDATORS OF THIS COMPANY are prepared to SELL, BY PRIVATE TREATY, the VALUABLE LEASE (42 years unexpired) of these MINES, together with the ENGINES, WATER WHEELS, DRESSING MACHINERY, and other PLANT on the SETT.

Railway communication in course of construction within a few miles of the mines.

Full particulars on application to Mr. W. GATH, Public Accountant, 2, Devonshire-street, Carlisle.

R. B. BROCKBANK } Liquidators.
WALTER GATH }

TO COLLIERY PROPRIETORS, MACHINISTS, AND OTHERS.

CHRISTIONYDD AND AVONEITHA COLLIERIES, NEAR RUABON.

MR. W. H. HILL WILL SELL, BY AUCTION, on Tuesday, October 29, 1878, on the several banks of the above pits, which are situate about a mile from Ruabon Station, on the Great Western Railway, the WHOLE of the VALUABLE

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Consisting of excellent VERTICAL WINDING ENGINES, steam pipes and connections complete; PUMPING ENGINES; drums for round and flat ropes; EGG-END BOILERS; pit heads and pulleys; conducting rods; tiplers; carriers; pit bank and road weighing machines; windlass; landing plates; several hundred yards of flat and round wire ropes; a large quantity of various tram rails; tipping wagons; trolleys and pyches; the several buildings and erections of brick and slate; sundry old iron and timber: several pieces of office furniture; and numerous other effects, which are fully described in catalogues to be had seven days prior to the sale from the offices of the Auctioneer, Brook-street, Oswestry.

John Phillips, Strytt-issa, Ruabon, will, on receiving a clear day's notice, by letter or otherwise, be prepared to show the several lots.

Sale to commence at Twelve o'clock punctually.

GREENHAUME HEMATITE IRON ORE MINES.

TO BE SOLD, BY PRIVATE TREATY, the GREENHAUME HEMATITE IRON ORE MINES, near DALTON-IN-FURNESS, in the heart of the Furness Hematite District, including the unexpired term in the mineral and cottage leases, together with the MACHINERY, PLANT, and STOCK of IRON ORE now at bank.

Full particulars as to the leasees and plans, with an inventory of the machinery, plant, and iron ore, can be seen on application to JOHN S. SAWREY, at the offices of Messrs. SALMON and MAJOR, Solicitors, Ulverston.

Magistrates Office, Ulverston, 1st October, 1878.

FOR SALE, BY PRIVATE CONTRACT, an existing LEASE, on low royalties, for a long term of years, of the No. 3 RHONDDA and STEAM COAL SEAMS, lying under a compact single mineral property of nearly SEVEN HUNDRED ACRES in extent, situate in the county of GLAMORGAN, adjoining and connected with a public line of railway.

Also, OPENED LEVELS upon the No. 2 RHONDDA SEAM of COAL, in the same property, with the PLANT, BUILDINGS, TWENTY WORKMEN'S HOUSES, MANAGER'S HOUSE, and PUBLIC HOUSE.

The depth to the No. 3 Rhondda, near the deep side of the property, is estimated to be under 100 yards.

Also a LEASE of the SURFACE, which is well wooded and watered. The Farming Stock upon the premises to be taken at a valuation.

For further particulars and to treat, apply to Messrs. BROWN and ADAMS, Guildhall Chambers, Cardiff.

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FOR SALE, a SILVER-LEAD MINE, situated in CORNWALL, in the same strata of silver-lead bearing ground as the celebrated Wheal Mary Ann and Trelawny Mines. Prospects excellent. Easy price and terms. Apply to R. J. RUTTER, 5, Pyne's-terrace, St. David's, Exeter.

TO LET, an EXTENSIVE FIELD of FIRE-CLAY, in the vicinity of DUNFERMLINE. It has been thoroughly tested by bores and a trial pit, and reported upon by an eminent Mining Engineer, as practically inexhaustible; while a Mineral Analyst certifies the clay as excellent, and well adapted for all ornamental work. Average seam, 10 feet thick, mostly near the surface. Railway already in field, and coal pit close at hand.

Further particulars of P. H. CAMERON, S.S.C., 35, Hanover-street, Edinburgh.

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18 H.P. PORTABLE STEAM ENGINE, with link motion reversing gear, ready for delivery; also gear to wind and pump.

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A 6-ft. PAN MORTAR MILL, VERTICAL ENGINE, and BOILER, with carriage and travelling wheels.

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METALLURGY—ROYAL SCHOOL OF MINES, JERMYN STREET.—DR. PERCY, F.R.S., will commence a COURSE of EIGHTY LECTURES on METALLURGY on MONDAY next, the 21st instant, at Two o'clock, to be continued on each succeeding Tuesday, Wednesday, Thursday, and Monday, at the same hour. Fee for the Course, £4.

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(LIMITED),

SITUATE IN THE PARISH OF LLANDIGLA, FLINTSHIRE.

Capital, £12,500, in 5000 shares of £2 10s. each.

Payment, 10s. deposit on application, and £2 on allotment.

First issue, 3000 shares at par £7500
Reserve, 2000 shares ..... 5000=£12,500.

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SOLICITOR—EDWARD HOUNSELL, Esq., 8, Furnivals Inn.
LOCAL MANAGER AT THE MINE—Capt. JOSEPH A. EDE, Llanarmon, near Mold.
SECRETARY—Mr. JOHN LUTTMAN, Public Accountant,
OFFICES,—52, QUEEN VICTORIA STREET, LONDON, E.C.

PROSPECTUS.

The fully realised importance and value of the lead mines of North Wales renders unnecessary more than a passing allusion to those of Minera, Van, North Hendre, Pant-y-Mwyn, and East Pant-Du, it being well known that Minera, with a capital of only £45,000, has returned nearly £1,500,000, yielding £808,925 in dividends; that the Van Mine shares are to-day at a premium of 300 per cent. in the market, and that the three last named are also paying large dividends.

The richest lead-producing districts in the Principality are in Denbighshire and Flintshire, and the Lead Era Mine (the property of this company) is situated in the last-mentioned county. In these districts it is well known that there is more or less of the millstone grit formation, which, overlying the mountain limestone, has a direction nearly north and south. In this grant, and in this favourable rock formation, there are two well-defined "flats"—that is to say, beds—varying from 3 to 15 fms. in thickness, which are intersected by several distinct and champion lodes of lead of the first quality, it being too important not to be mentioned that the richest deposits are invariably found at and about the points where the lodes are intersected by cross lodes and cross courses. Such deposits of ore are productive, rich in quality, easily wrought, and developed with small expenditure of capital, in proof of which it is only necessary to refer to the several mines before mentioned.

The Lead Era Mine is in the midst of this well known great lead-producing locality, and comprising an area of 200 acres, has no less than five distinct champion lodes intersecting the flats which underlie its surface. The grant is held by licence from Sir William G. Williams, Bart., of Bodelwyddan, near Rhyl, and is defined by a map attached thereto. The licence is in favour of Joseph A. Ede and Richard Tredinnick for three years, with an agreement for 21 years lease whenever applied for, at a royalty of 1-12th, to be reduced to 1 16th on the lease being taken up. The whole of the ground is highly mineralised, and presents unmistakable evidence of great mineral and chemical action—similar, in fact, to other districts in which rich and profitable mines are found, the characteristics and prospects being altogether such as in the opinion of practical authorities will ensure early and important discoveries of lead ore.

It has been determined, with the object of promptly developing this property, to form a limited liability company, in 5000 shares of £2 10s. each, fully paid, of which the first issue will be 3000 shares at par. The remaining 2000 shares to be held in reserve, and not issued without the consent of a special or extraordinary general meeting of the proprietary. But in the opinion of competent authorities the proceeds of the present issue will prove ample to open out a prosperous and profitable mine unsurpassed throughout the Principality.

The only contract is one dated Sept. 4, 1878, between Joseph A Ede and Richard Tredinnick of the first part, and John Luttman, as trustee on behalf of the company, of the second part. This, together with the Memorandum and Articles of Association, can be seen at the offices of the company, where prospectuses, forms of application, &c., can be obtained.

Attention is invited to the accompanying reports from mining authorities of high character, which fully enter into the merits and future prospects of the company's concession.

EXTRACTS FROM REPORTS.

This highly interesting mineral property, and its geological position, is situate in the millstone grit formation, overlying the mountain limestone, the course of which bears nearly north and south through the two shires of Denbigh and Flint, and at Lead Era is *de facto* the same formation as proved so productive and profitat Hendre Ucha, Gwern-y-Mynydd, Vawnog, Cribiolyn, Bryn-Gwyn, Pwyll-y-Wheel, Jamaica, and lastly East Pant Du, the most recently established prize in the district. The mines comprised as a whole, paid over a long series of years 70 per cent. annually on the aggregate capital. Lead Era possesses all the elements concentrated in its geological, geographical, and mineralogical character associated with all the mines referred to, and I am convinced that it will equal and probably surpass them in its ultimate yield of lead ore. The company's concession is traversed by two true bearing beds, ranging from 3 to 15 fms. in thickness; these are termed the upper and lower flats. . . . . The surrounding circumstances are favourable to the formation of large deposits of ore at Lead Era. As a practical miner, and having studied especially the stratification, while drawing my inferences and deductions from results actually achieved in adjacent and adjoining mines, I conclude that at the junction of the lodes and flats large deposits of lead ores are certain to be found at Lead Era Mine. . . .

The physical features of the stratification command especial attention. I have gone over and carefully considered the characteristics, and find them all that can be desired. It is evident that the varied strata have been subject to violent and frequent disturbances, as in places the bottom layer of the stratum becomes prominently conspicuous. The dislocation of strata is found invariably in the vicinity of rich mines, and I feel confident of abundant yield from the Lead Era lodes, and at shallow depths. Again, the configuration of the surface is favourable for adit and economical development. . . . Well knowing the general results of the junction of the lodes and flats throughout the whole districts, and thoroughly appreciating the prospects presented, I have much pleasure in attesting the true mineral worth of the Lead Era Mine, and in my judgment the expenditure of 1000*l.* will give you a property unsurpassed in yield and profits throughout this long prosperous and renowned district. WILLIAM ROBERTS.

East Pant-Du Lead Mining Company, August 12, 1878.

(Captain Roberts is himself returning, by aid of only ten miners, at East Pant-Du 40 tons of lead ore monthly, at a cost of but 200*l.*, while success was attained there in the first instance by an expenditure of less than 300*l.*)

Mount Pleasant House, Jamaica Mines, near Mold, Sept. 6, 1878.—The Lead Era property is situate about one mile west of the great Minera Mines, bounded east by the Old Creigiog, and north by East Pant-Du Mines.

Your mineral grant comprises a very extensive area of undeveloped ground, the stratification is limestone of a highly metalliferous and congenial character for producing lead, overlaid east by the chert and flat measures, flanked eastward by the coal measures, which constitute the strongest indications of good lead-bearing ground; as a rule, there is almost a certainty of great richess at and in the junction of the coal measures. This at once bears strong testimony to the wealth and excellence of your property. . . . The most prominent lode in your sett, and I challenge the Principality to prove its superior, is that of the great Minera. These results guarantee in my opinion the sterling wealth of your property, for its site in every point of view is favourable, and in the neighbourhood of the most successful group of mines throughout the Principality. . . . Having referred to the northern mines, I will now refer to other neighbours of importance, as for example East Pant-Du, Jamaica, Bryn-Gwyn, Mount Pleasant, Hendre Ucha, Cribiolyn, Gwern-y-Mynydd, Cae-fy-Nain, Fawnog, Frou-Fawnog. Many of these mines paid 70 per cent. annually, and netted beyond the costs of opening fully £160,000 profits. These mines are all situate in the same formation as the Lead Era, and there is no earthly season why your mine should not prove equally successful.

It only requires a very moderate capital, concentrated as recommended, and a vigorous prosecution, to ensure at an early date highly satisfactory results—that is to say a paying mine, and that too of no ordinary character.

I have no hesitation in recommending your property to capitalists, believing that they will be handsomely rewarded for their outlay. PETER DYKINS.

It is situate upon the millstone grit formation overlying the mountain limestone, which carries its course nearly north and south through the counties of Denbigh and Flint, and in the same formation as that in which Hendre Ucha, Vawnog, Cribiolyn, Bryn-Gwyn, Pwll-y-Wheel, Jamaica, and East Pant-Du proved so productive. All of these mines were exceedingly rich and profitable. Your property, Lead Era, possesses all the elements that characterised the mines referred to while, from its peculiar geological position, I am inclined to believe not only that it equals but may even surpass them in mineral wealth. . . . . To develope the property I advocate at first sinking a few pits to determine the true bearing and dip of the flats; when this is effected, then select the most advantageous positions for driving one or more levels on the lodes to meet the strikes in their junction therewith. These explorations can be carried out without the aid of pumping machinery from a deep valley formed at right angles with the strike of the beds. Thus it becomes apparent that development will prove rapid, cheap, and effectual, as facilities for mining are peculiarly enhanced—nay, unsurpassed—within my experience by the favourable conformation of the surface. Adits will command all five lodes, and as many more as enter from the Minera Mines standing away to the east, and these in entering the flats, are likely to prove eminently profitable. J. ANWYL EDE.

Truro Mines, Nerquis, Flintshire.

. . . . There is also a strong north and south lode which I propose driving upon, and from information I learn that ore has been discovered on the strike a short distance to the south of our starting point. I am very confident we shall be very successful here. I have been employed on the flats for ten years, and I have never seen a place which I could so confidently recommend.

J. ANWYL EDE.

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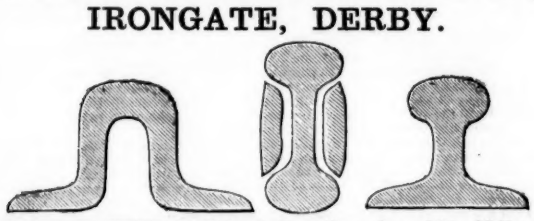

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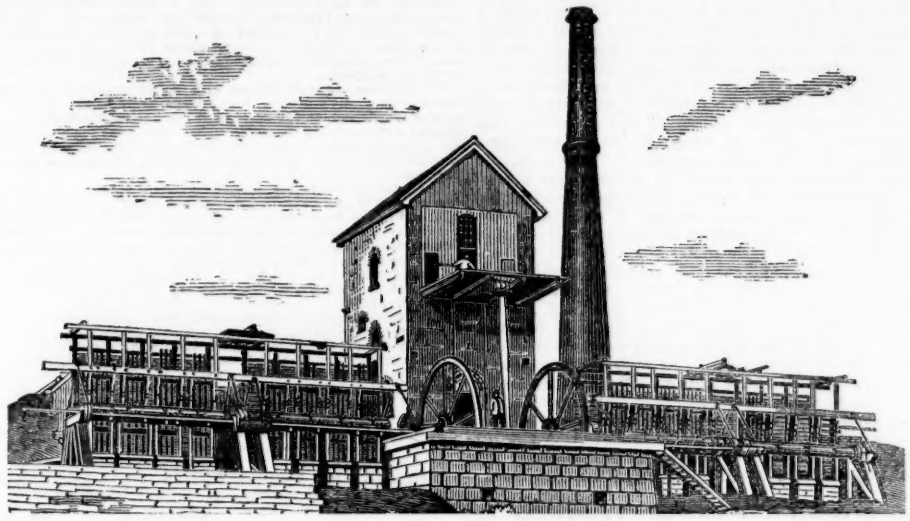

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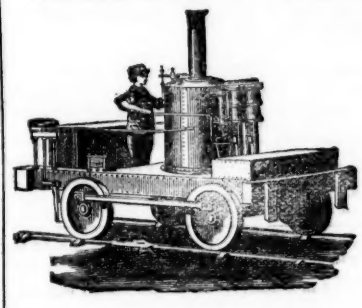

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As supplied to the Right Hon. the Earl of Derby, Sir W. G. Armstrong, &c., &c., which is most efficient in operation, and makes the best Road Metal.

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Long experience has enabled the Dunston Engine Works Company to bring their machines to great perfection.

Price lists and particulars, with illustrations, sent on application to Mr. THOMAS ARCHER, Jun., Manager, at the works; or to Mr. THOMAS BRANDRETH GIBBS, 122, Dunster House, Mark-lane, London.

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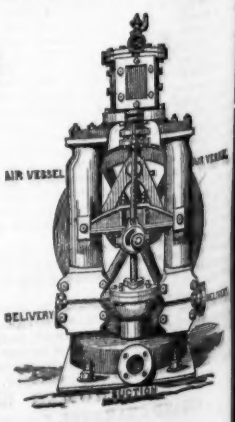

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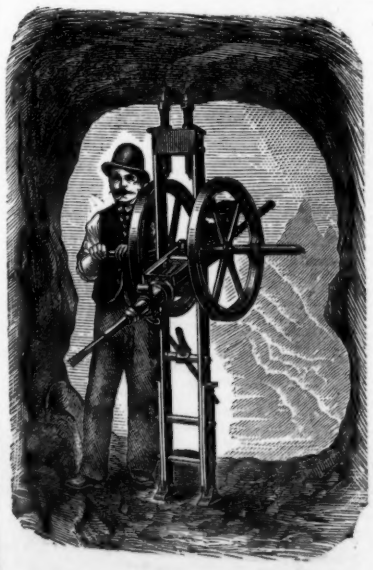

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THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Shares	Mines.	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
4000	Brookwood, c, Buckfastleigh	1 16 0	... 1 ...	¾ 1	... 3 16 0	... 0 3 0	...Nov. 1875
2000	Bryn Alyn,* l, Denbigh	10 0 0	... — ...	...	... 0 7 0	... 0 7 0	...Jan. 1877
10000	Caron, l, Cardigan*	2 0 0	... 2½ ...	2 2¼	... 0 4 0	... 0 2 0	...Oct. 1878
1000	Carn Brea c, t, Illogan†	55 7 6	... 32½ ...	25 30	... 308 0 0	... 1 0 0	...Feb. 1874
400	Cashwell l, Cumberland*	2 10 0	... — ...	...	... 1 9 6	... 0 2 0	...Aug. 1876
2450	Cook's Kitchen, t, Illogan†	24 14 9	... 1½ ...	¾ ⅛	... 11 17 0	... 0 7 6	...Jan. 1873
10240	Devon Gt. Consols, c, Tavistock†	1 0 0	... 2 ...	1¼ 1¼	... 116 15 0	... 0 5 0	...July 1877
4296	Dolcoath, c, t, Camborne	10 14 10	... 24 ...	21 23	... 112 16 3	... 0 5 0	...Aug. 1878
5000	East Black Craig,* l., Scotland	5 0 0	... — ...	...	... 0 10 0	... 0 10 0	...Feb. 1877
300	East Darren, l, Cardiganshire	32 0 0	... — ...	...	... 235 10 0	... 1 0 0	...Aug. 1876
5000	East Pool, t, c, Illogan	0 9 9	... 9 ...	8¼ 8¼	... 15 11 9	... 0 2 6	...Aug. 1878
40000	Glasgow Cara., c* [30,000 £1 p., 10,000 15-. p.]	...	... 1¼ ...	¾ 1	... 0 13 10	... 0 0 6	...Aug 1878
7500	Gorsedd and Merllyn Cons., l, Flint	2 10 0	... 4¼ ...	3¼ 4¼	... 0 5 0	... 0 5 0	...Aug. 1877
5000	Great Laxey, l, Isle of Man*	4 0 0	... 18 ...	15 16 xd	... 24 5 0	... 0 6 0	...Oct. 1878
615	Gt. Retallack, l, bl, Perranzabuloe	5 18 6	... — ...	...	... 0 1 6	... 0 1 6	...May 1876
8400	Green Hurth, l, Durham*	0 6 0	... 1 ...	⅜ 1	... 1 18 0	... 0 3 0	...Mar. 1878
20000	Grogwinion, l, Cardigan*	2 0 0	... 2½ ...	2⅛ 3	... 0 14 10	... 0 0 10	...Aug. 1878
9830	Gunnislake (Clitters), t, c	5 5 0	... 2¾ ...	2½ 2¾	... 0 13 9	... 0 1 0	...Oct. 1878
50000	Holmbush, a, c, s-l, Callington*	1 0 0	... — ...	...	... 0 4 6	... 0 0 6	...Sept. 187-
2800	Isle of Man, l, Isle of Man*	25 0 0	... — ...	...	... 82 5 0	... 0 0 0	...Feb. 1876
20000	Leadhills,* l, Lanarkshire	6 0 0	... 2¼ ...	2 2¼	... 0 15 0	... 0 3 0	...Mar. 1878
400	Lisburne, l, Cardiganshire	18 15 0	... 60 ...	40 50	... 586 10 0	... 1 0 0	...May 1878
14000	Llanidloes,* l, Montgomery	3 0 0	... 1¾ ...	...	... 0 9 0	... 0 4 6	...Nov. 1876
9000	Marke Valley, c, Linkinhorne	5 3 6	... ⅛ ..	⅛ ⅜	... 7 15 0	... 0 2 0	...Jan. 1876
10000	Mellanear Copper, Hayle*	0 10 0	... 4 ...	3¾ 4	... 0 5 0	... 0 3 0	...July 1878
5000	Minera Mining Co., l, Wrexham*	5 0 0	... 10 ...	7 8	... 67 15 8	... 0 2 6	...Sept. 1878
20000	Mining Co. of Ireland, c, e, l*	7 0 0	... — ...	...	... 23 17 6	... 0 2 6	...Jan. 1878
444	North Busy, c, Chacewater	3 9 6	... — ...	...	... 1 10 0	... 1 0 0	...July 1877
10289	North Hendre, l, Wales	2 1 0	... — ...	...	... 2 7 6	... 0 5 0	...June 1878
30000	Panty Mwyn,* l, Mold (8794 iss.)	2 0 0	... 5½ ...	5 5½	... 0 3 0	... 0 2 0	...Aug. 1874
6000	Pedn-an-dree Con., t, Redruth	0 8 6	... — ...	...	... 0 9 0	... 0 9 0	...June 1877
5000	Penhalls, t, St. Agnes	3 2 6	... 1 ...	¾ 1	... 3 13 6	... 0 2 0	...July 1875
6000	Pennant, l, bar, North Wales*	5 0 0	... 5 ...	4 4½	... 0 10 0	... 0 5 0	...Mar. 1878
45793	Penstruthal,* t, c, Gwennap	2 0 0	... 6s. ...	⅛ ¼	... 0 2 8	... 0 0 8	...Nov. 18.5
18000	Prince Patrick,* s-l, Holywell	1 0 0	... 1¾ ...	1¾ 1¾	... 0 14 0	... 0 1 8	...Jan. 1876
10000	Red Rock,* l, Cardigan	2 0 0	... 2½ ...	2 2¼	... 0 4 0	... 0 2 0	...Jan. 1878
42000	Roman Gravels, l, Salop*	7 10 0	... 7¼ ...	6¾ 6¾	... 7 15 9	... 0 5 0	...Mar. 1877
512	South Caradon, c, St. Cleer	1 5 0	... 60 ...	50 55	... 743 10 0	... 1 0 0	...Sept. 1878
6123	South Condurrow, t, c, Camborne	6 5 6	... 11 ...	10 10½	... 4 1 0	... 0 8 0	...Aug. 1878
12000	St. Harmon,* l, Montgom	3 0 0	... 3 ...	2½ 3	... 0 12 0	... 0 3 0	...July 1878
10000	So. Pr. Patrick,* s-l. (8000 sh. issued)	1 0 0	... — ...	...	... 0 7 0	... 0 1 0	...Oct. 1875
4500	South Wh. Frances, c, Illogan†	7 12 4	... 5 ...	4¼ 4¾	... 37 5 0	... 0 5 0	...Sept. 1878
12000	Tankerville, l, Salop*	6 0 0	... 4½ ...	3⅞ 4⅛	... 4 17 0	... 0 5 0	...Dec. 1876
6000	Tincroft, c, t, Pool, Illogan†	11 10 0	... 7 ...	5½ 6	... 50 8 6	... 0 5 0	...May 1877
15000	Van, l, Llanidloes*	4 5 0	... 18 ...	16 17	... 23 5 6	... 0 5 0	...Oct. 1878
3000	W. Chiverton, l, Perranzabuloe†	12 10 0	... 4½ ...	2½ 3½	... 55 10 0	... 0 10 0	...Feb. 1878
1783	West Poldice, St. Day	10 0 0	... — ...	...	... 1 19 0	... 0 4 0	...July 1878
512	West Tolgus, c, Redruth	95 10 0	... 49 ...	45 47½	... 31 0 0	... 1 5 0	...Sept. 1878
2048	West Wheal Frances, t, Illogan	28 8 9	... 2 ...	1¾ 1¾	... 3 12 6	... 0 5 0	...Oct. 1872
600	West Wheal Seton, c, Camborne†	47 0 0	... 9 ...	7 9	... 446 0 0	... 0 15 0	...Apr. 1878
12000	West WyeValley,* l, Montgom	3 0 0	... 2¼ ...	2¼ 2¼	... 0 12 0	... 0 3 0	...Nov. 1877
1024	Wh. Eliza Consols t, St. Austell	18 0 0	... — ...	...	... 19 10 0	... 1 10 0	...Aug. 1878
2048	Wheal Jane, t, Kea	2 13 10	... ¾ ...	⅜ ⅜	... 8 5 0	... 0 5 0	...July 1876
4298	Wheal Kitty, t, St. Agnes	5 4 8	... 1¾ ...	1 1¼	... 11 19 6	... 0 2 6	...Dec. 1874
25300	Wh. Newton, a, c, s, t, Calstock*	1 0 0	... — ...	...	... 0 8 6	... 0 4 0	...Sept. 18.7
80	Wheal Owles, t, St. Just†	161 5 0	... 25 ...	15 20	... 522 10 0	... 4 0 0	...Aug. 1872
8000	Wheal Peevor, t, Redruth	7 11 0	... 6¼ ...	6 6½	... 0 10 0	... 0 5 0	...Aug. 1878
8000	Wheal Prussia, t, Redruth	0 5 0	... — ...	...	... 0 4 0	... 0 1 0	...July 1877
10000	Wye Valley, l, Montgomery*	3 0 0	... 2½ ...	2 2½	... 0 10 6	... 0 4 6	...Oct. 1876

FOREIGN DIVIDEND MINES.

35500	Alamillos, l, Spain*†	3 0 0	... 1½ ..	1 1¼	... 1 19 3	... 0 1 0	...April 1878
30000	Almada and Tirito Consol., s*†	1 0 0	... ½ ..	¾ ⅝	... 0 6 3	... 0 1 0	...May 1876
20000	Australian, c, South Australia†	7 7 6	... 1¾ ..	1¾ 1¾	... 1 1 6	... 0 2 0	...July 1878
10000	Battle Mountain,* c, (6240 part pd.)	5 0 0	... — ...	...	... 0 10 0	... 0 10 0	...Nov. 1872
15000	Birdseye Creek, g, California*	4 0 0	... ¾ ...	½ ¾	... 0 14 0	... 0 2 6	...June 1874
20000	Cape Copper Mining,*† So. Africa	7 0 0	... 30 ...	28 30	... 32 5 0	... 0 17 6	...Sept. 1878
34433	Cedar Creek, g, California*	5 0 0	... ⅜ ..	⅛ ⅜	... 0 5 0	... 0 2 6	...June 1873
35000	Cesena Sul. Co., Romanga, Italy*	10 0 0	... — ...	...	... 0 18 0	... 0 2 0	...Aug. 1878
15000	Chicago, s, Utah*	10 0 0	... 1¼ ...	¾ 1¼	... 2 8 0	... 0 4 0	...Nov. 1876
65000	Colorado United, s-l, Colorado*†	5 0 0	... 3 ...	2 2½	... 0 13 6	... 0 4 0	...Jan. 1878
10000	Copiapo, c, Chili* (£20 shares)	16 15 0	... — ...	...	... 7 11 5	... 0 3 0	...May 1877
00000	Don Pedro North del Rey*†	0 16 0	... ⅝ ..	½ ⅝	... 2 5 9	... 0 2 0	...Mar. 1875
28500	Eberhardt & Aurora, s, Nevada*†	10 0 0	... 4¼ ..	3¼ 4	... 1 8 0	... 0 3 0	...Dec. 1877
70000	English & Australian, c† S. Aust.	2 10 0	... 1¾ ...	1 1¼	... 2 15 9	... 0 1 0	...Mar. 1877
30800	Flagstaff, s, Utah*	10 0 0	... ⅝ ..	¾ ⅝	... 4 2 0	... 0 5 0	...July 1878
25000	Fortuna, l, Spain*†	2 0 0	... 4¼ ..	3¼ 4¼	... 6 19 10	... 0 5 0	...April 1878
55000	Frontino & Bolivia, g, New Gran.*†	2 0 0	... 2¾ ...	2 2½	... 0 2 6	... 0 1 6	...Sept. 1878
30000	Gold Run, hyd.	1 0 0	... — ...	...	... 0 2 4	... 0 0 4	...Oct. 1872
68000	Kapunda Mining Co. Australia†	1 3 0	... — ...	...	... 0 2 4	... 0 0 6	...June 1873
20000	Last Chance, s,* Utah	5 0 0	... ⅜ ..	⅜ ⅞	... 0 14 0	... 0 2 0	...July 1872
15000	Linares, l, Spain*†	3 0 0	... 4½ ...	4 4½	... 17 7 10	... 0 5 0	...April 1878
65000	London and California, g*†	2 0 0	... ½ ...	¾ ⅞	... 0 1 0	... 0 1 0	...July 1875
7837	Lusitanian, Portugal*† (£5 sh.)	3 10 0	... — ...	...	... 1 11 6	... 0 1 6	...Mar. 1872
5000	Mamm. Copperopolis of Utah, c, s	10 0 0	... — ...	...	... 0 5 0	... 0 5 0	...Dec. 1872
5000	Mountain Chief, s, Utah*	10 0 0	... — ...	...	... 0 4 0	... 0 4 0	...Jan. 1873
10000	Pontgibaud, s-l, France†	20 0 0	... 30 ...	26 28	... 26 19 11	... 0 11 11	...June 1878
100000	Port Phillip, g, Claues*†	1 0 0	... ⅝ ..	½ ⅝	... 1 11 0	... 0 1 0	...Sept. 1878
54000	Richmond Consols, s, Nevada*†	5 0 0	... 10¼ ...	9¾ 10¼	... 6 1 6	... 0 10 0	...Aug. 1878
40000	Santa Barbara,* g, Brazil	0 10 0	... 1½ ..	1¼ 1¾	... 0 4 9	... 0 1 0	...April 1878
120000	Scottish Australian Mining Co.*†	1 0 0	... 2 ...	1¾ 2	... 15 per cent.		...May 1878
80000	Scottish Austral. Mining Co., New	0 10 0	... ⅞ ..	¾ ⅞	... 15 per cent.		...May 1878
122500	Sierra Buttes, g, California*†	2 0 0	... 1¾ ...	1¾ 1¾	... 1 18 0	... 0 2 0	...Oct. 1877
140625	S. B. Piumas Eureka	2 0 0	... 3 ...	2½ 3	... 1 18 0	... 0 2 0	...Apr. 1878
60000	South Aurora, s, Nevada*	5 0 0	... ⅛ ..	⅛ ⅛	... 0 18 0	... 0 2 0	...Aug. 1878
£253000	St. John del Rey*† (£5 stock & multiples dealt in)	... 275 285	... ⅛ year.	17½ p. ct. for June			1878
20000	Tolima, g, s* So. America	5 0 0	... — ...	...	... 0 11 6	... 0 6 6	...May 1874
25000	Victoria (London)*, g, Australia	1 0 0	... ⅜ ..	⅜ ⅜	... 0 12 6	... 0 0 7½	Jan. 1878
18000	Western Andes, s,* New Granada	5 0 0	... — ...	...	... 0 12 0	... 0 12 0	...July 1876
91500	W. Prussian (5500 pref. sh. 10l. pd)	10 0 0	... 10⅛ ...	10 10½	... 1 6 0	... 0 4 0	...Oct. 1878

NON-DIVIDEND FOREIGN MINES.

Shares	Mines.	Paid.	Last Pr.	Clos. Pr.	Last Call.
12000	Argentine, g, Argentine Republic	5 0 0	... — ...	...	...Fully pd
3000	Bellavista, s, Peru* (£10 shares)	10 0 0	... — ...	...	...Fully pd.
30000	Blue Tent, hyd., California	5 0 0	... — ...	...	...Fully pd.
10000	Buena Ventura,* l, Llano de las Infantas, Spain (£2 sh.)	0 5 0	... 3 ...	2¾ 3	...Fully pd
49935	Chontales, g, s, Nicaragua*†	2 0 0	... — ...	...	...Oct. 1878
16000	Condes of Chili, s-l	5 0 0	... ⅝ ..	½ ⅝	...Fully pd.
20000	English Australian, g, Victoria*	1 0 0	... — ...	...	...Fully pd.
35000	Excelsior Hydraulic Gold Washing Co., California*	6 0 0	... ⅜ ..	⅛ ⅜	...Fully pd.
100000	Exchequer, g, s, California*†	1 0 0	... — ...	...	...Dec. 1871
40000	Holcombe Valley, g,* California	1 0 0	... ¾ ..	½ ⅝	...Fully pd.
8000	Hornachos,* s-l, Spain	1 0 0	... — ...	...	...Fully pd.
12000	Hultafall,* l, bl, Orebro, Sweden	10 0 0	... 14 ...	13 14	...Fully pd.
12000	Hunter Consolidated, s-l, Utah	5 0 0	... 3½ ...	3 3½	...Fully pd
20000	Imperial Brazilian Collieries, Brazil*	10 0 0	... — ...	...	...Fully pd.
7500	Isabelle, g, s*, California (£20 shares)	5 0 6	... — ...	...	...Fully pd.
100000	I. X. L., g, s, California*	5 0 0	... 17½ ...	15 17½	... Oct. 1878
50000	Javali, g, Nicaragua*	1 0 0	... ¾ ...	⅛ ¼	...Fully pd.
3500	La Manche, l, Newfoundland	2 0 0	... 9s. ...	7s. 9s.	...Fully pd.
12000	Lanestosa,* l, z, Viscaya, Spain (£2 shares)	10 0 0	... — ...	...	...Fully pd.
75000	Malabar, g, Colombia* (67165 issued)	1 15 0	... — ...	...	...Mar. 1876
40000	Malpaso, g, Colombia* (7400 pref. shares, fully paid)	1 0 0	... ¾ ...	⅛ ⅜	...Fully pd.
12000	Menzenberg, c, Honnef, Germany*	1 0 0	... ⅜ ...	¼ ⅜	...Fully pd.
4588	New Bensberg, i, l, Germany	5 5 0	... — ...	...	...Fully pd.
66000	New Quebrada, c, Venezuela*	5 0 0	... — ...	...	...Nov. 1876
20000	New Zealand Kapanga, g, Coromandel*	5 0 0	... 1¾ ...	1¼ 1¾	...Fully pd.
3000	Oregon,* g, Oregon, U.S. (preference shares)	5 0 0	... 1¾ ..	1¼ 1⅜	...Fully pd.
50000	Panulcillo, c, Chili*† (£80000 debentures)	4 0 0	... 2¼ ...	...	...Fully pd.
90000	Pestarena United, g, Italy*†	4 0 0	... 1¼ ...	¾ 1¼	...Fully pd.
25000	Pitanqui,* g, Brazil (incl. 5000 sh. £1 fully paid)	3 0 0	... ¾ ...	⅛ ¼	...Fully pd.
25000	Placerville,* g q, California	0 5 0	... ¾ ...	¼ ¾	...Aug. 1878
50000	Providencia and New Rosario, s, Mexico*	2 0 0	... 2½ ...	2⅛ 2¾	...Fully pd.
40000	Ravenscliff, g, New Zealand; c, South Australia	1 0 0	... — ...	...	...Fully pd.
5 000	Rica, g, Colombia* (40000 issued)	0 5 0	... — ...	¼	...July 1878
£2,191,000	Rio Tinto,* c, Huelva, Spain	1 0 0	... ¾ ...	⅛ ¼	...Fully pa.
100000	Rosea Grande, g, Brazil*† (£1 shares)	Stock	... 61 ...	56 58	...Fully pd.
30040	Russia Copper, Orenburg and Ufa*†	1 0 0	... ⅛ ...	⅛	...Fully pd.
10000	Silver Plume, s, Colorado*	10 0 0	... — ...	...	...Fully pd.
30000	Tecoma, s, Utah*	1 0 0	... — ...	...	...Fully pd.
43174	United Mexican, s, Mexico*†	10 0 0	... ⅝ ...	⅜ ⅝	...Fully pd.
14000	Utah, g, s-l, Utah*	29 0 2	... 4¼ ...	3¼ 4¼	...May 1878
50000	Virneberg, c Rheinbreitbach, Germany*	5 0 0	... — ...	...	...Fully pd
18000	Yorke Peninsula, c, South Australia	2 0 0	... — ...	...	...Fully pd.
84800	Yorke Peninsula, c, South Australia Preference	1 0 0	... ⅛ ...	⅛ ⅛	...Fully pd.

§ Have made calls since last dividend was paid.

FOREIGN AND MISCELLANEOUS STOCKS, BONDS, LOANS, AND TRUSTS.

	Closing Prices	
Argentine, 1868 6 per cent.	72	73
Bolivia, 6 per cent.	25½	26½
Brazilian, 1865, 5 per cent.	89	91
Chilian, 1886, 7 per cent.	92	96
City of Providence, 6 p.c. coupon bnds	101	103
Egyptian, Gov. preference	69	70
Do., unified debt, scrip	55¼	55¾
Do., 7 per cent., V.M.L.	78	80
Do., per cent. guar.	84	86
Do., E. Daira Sanieh	84	86
Foreign and Col. Gov. Trust, 6 p. ct.	68	70
Do., 5 per cent., 2d issue	58	63
Do., 6 per cent., 3d issue	60	65
Do., 1872, 4th issue	55	60
Do., 1873, 5th issue	50	55
Peruvian, 1870, 6 per cent.	12⅝	1 ⅜
Do., 1872, 5 per cent.	10	11
Russian, 5½ per cent. L. Mort.	...	—
Spanish, Quicksilver Mort., 5 p. ct.	95	98
United States Mort. 6 per cent.	99	101

NON-DIVIDEND MINES.

Shares.		Paid.	Last wk.	Clos. pr
40000	Aberdaunant, l, Llanidloes*	1	0 0 ...	⅜ ... ⅛ 1
2560	Aberllyn,* l, bl, Carnarvon	10	0 0 ...	12 ... 11 13
10000	Aberystwith,* s-l, Cardigan	5	0 0 ...	— ...
80	Albion, i, Cornwall	100	0 0 ...	— ...
7800	Alvig. & Burng.,*t, St. Aust.	3	0 0 ...	1¾ ... 1⅝ 1¾
12000	Assheton, i, Carnarvonshire*	5	0 0 ...	¾ ... ⅜ ¾
80000	Ballycummisk,* c, Schull	2	0 0 ...	— ...
12000	Bedford Unit.,* c, Twist. (11. liab.)	0	1 0 ...	¾ ... ⅜ ¾
30000	Bettws y-Coed,* l (20,000 issued)	1	0 0 ...	1⅛ ... 1 1¼
800	Blaen Caelan,* l, Cardigan	3	0 0 ...	4½ ... 4 4¾
3937	Blue Hills, t, c, St. Agnes	3	16 6 ...	¾ ... ½ ¾
30000	Boddris,* l, bl, Denbighshire	1	0 0 ...	1¾ ... 1⅝ 1⅞
1000	Bollihope Vale,* s-l, Durham	5	0 0 ...	— ...
200	Botallack, t, c, St. Just†	123	15 0 ...	— ...
2000	Bowden Hill,* ma	1	0 0 ...	— ...
6000	Bradwell Moss Rake	1	0 0 ...	1 ... ⅜ 1
10 00	British,* s l, Wrexham	2	0 0 ...	3 ... 2 3
256	Browngelly, c, St. Neot	9	10 0 ...	2½ ... 2¼ 2⅜
50000	Cambrian,* s-l, c, Cardiganshire	2	0 0 ...	3¼ .. 3 3¼
20000	Central Foxdale, i, I. of Man* (2l. sh.)	1	5 0 ...	— ...
10000	Central Van,* l. bl, Llanidloes	5	0 0 ...	— ...
5120	Clementina, l, Llanrwst*	1	0 0 ...	1¾ . 1¾ 1⅞
7500	Combellack,* t, Wendron	2	0 0 ...	— ...
6000	Combmartin, s-l, North Devon	0	7 0 ...	⅜ .. ⅛
24000	Court Grange, s-l, Cardiganshire	1	0 0 ...	1⅜ ... 1 1¼
15000	Cwm Brwyno,* l, Cardigan	2	0 0 ...	— ...
15000	Cwm Dwyfor,* c, s-l, Wales	1	0 0 ...	— ...
5000	Ditto, 12½ per cent. pref.	1	0 0 ...	— ...
3000	Cwmystwith (New), Cardiganshire	5	0 0 ...	— ...
1 80	D'Eresby Cons., l, bl, Carnarvon	10	0 0 ...	11 ... 8 10
10.4	D'Eresby Mountain, l, bl, Llanrwst	20	0 0 ...	50 ... 30 40
20000	Denbighshire Consolidated, l*	3	0 0 ...	2 .. 1½ 1¾
12000	Derwent,* l, Durham	4	0 0 ...	1¾ ... 1⅝ 1¾
10000	Dubby Syke, l, Durham*	0	16 0 ...	— ...
6144	East Caradon, c, St. Cleer†	2	19 0 ...	½ .. ⅜ ⅜
4000	East Chiverton, i, Perranzabuloe	7	7 6 ...	1½ ... 1⅜ 1½
3000	East Craven Moor*, l, Pateley Bdge	10	0 0 ...	10 ... 9 10
800	East Goginan, l, Cardigan	2	0 0 ...	— ...
30000	East Roman Gravels,* l, Salop	1	0 0 ...	6s. 8d. ... 6s. 8d.
18000	East Van, s, Llanidloes*	5	0 0 ...	3¾ 2¾ 2¼
1722	East Wh. Lovell, t, Helston	9	16 0 ...	⅜ ⅜ ⅜
20000	Elgar,* s-l, Cardiganshire	1	0 0 ...	⅜ .. ⅜ ⅜
10000	Frosterley,* l, Durham	1	0 0 ...	— ...
3950	Gawton, c, Tavistock	4	5 6 ...	⅜ .. ⅜ ⅜
12000	Glan Clwyd,* l, Gwyddelwern	1	0 0 ...	— ...
14000	Gleuroy,* s-l, Isle of Man	4	5 0 ...	¾ .. ⅜ ¾
10000	Glyn,* l, Llanidloes	2	0 0 ...	¾ .. ⅜ ¾
12000	Goginan, & Level Newydd, Card., l	2	10 0 ...	— ...
20000	Goren,* s-l, Carmarthen	1	0 0 ...	1 ... ¾ 1
20000	Gt. E. Foxdale, l, I. of Man (1l. sh)	0	18 0 ...	— ...
12000	Great Holway,* l, Flintshire	5	0 0 ...	5 ... 4½ 5
9500	Great Pant-y-Pydew, l, Holywell	2	0 0 ...	— ...
6000	Gt. Wheal Eleanor, t, North Bovey	1	17 6 ...	2 ... 1¾ 2
6000	Great Wheal Rodd,* s-l, Cornwall	0	10 0 ...	1 ... ¾ 1
10000	Harehope Gill,* l, Durham (£1 sh.)	0	5 0 ...	— ...
600	Hartington Moor,* carb. l, Derby	1	0 0 ...	2 ... 1½ 2
6400	Harwood,* l, Durham	0	15 0 ...	— ...
1024	Herodsfoot, i, near Liskeard†	8	10 0 ...	4½ ... 2 3
13000	Hingston Down, c, Calstock*†	0	6 0 ...	— ... ⅜ ⅜
5000	Hush Elsteddfod Minera,* l	2	0 0 ...	— ...
2500	Killaloe, s-l, Tipperary†	1	0 0 ...	— ...
6000	Killifreth, t, Chacewater	2	7 6 ...	1 ... ¾ 1
25000	Kingston Con., s-l, Stoke Climsland.	1	0 0 ...	— ...
	Ditto, preference	1	0 0 ...	1⅛ ... 1 1⅛
12000	Ladywell,* l, Salop	2	10 0 ...	1 ... ¾ 1
12000	Ditto, 10 per cent. pref., 1l. each	0	10 0 ...	⅜ .. ¾ ⅝
8000	Lead Era,* l, Mold	2	10 0 ...	3 ... 2½ 3
2800	Levant, c, t, St. Just	10	4 6 ...	— ...
1400	Lisburne Syndic.,* l, Cardigan	5	0 0 ...	8 ... 6 8
6000	Livingstone Consols, t, St. Agnes	0	10 0 ...	1 ... ¾ 1
8120	Lovell, t, Wendron	0	16 0 ...	2 ... 1¼ 2
25000	Llanrhaiadr, l, Montgomery*	2	0 0 ...	— ...
30000	Llanrwst,* l, Carnarvon	2	0 0 ...	3 ... 2 3
24	Mawston,* l, South Wales	50	0 0 ...	65 ... 60 65
6000	Medlyn Moor, t, Wendron	2	9 10 ...	— ...
11000	Melyndwr, l, Cardigan*	8	0 0 ...	1¾ ... ¾ 1¼
7000	Mid Devon Copper*	0	6 8 ...	1¾ ... 1 1¼
21000	Ditto	0	2 6 ...	1 ... ¾ 1
8000	Mineral Corp. of Great Britain*	10	0 0 ...	11 ... 10 11
11000	Monydd Gorddu, l, Cardigan* (Red.)	5	0 0 ...	5 ... 3 5
12000	Morfa Du, s, g, s, Anglesea	0	15 0 ...	¾ ... ¾ ⅞
28000	Nant-y-Ronen, s-l, Cardigan*	1	0 0 ...	— ...
15000	Nascent Copper*	1	0 0 ...	— ...
4768	New Bronfloyd,* , Cardigan (5l. sh.)	3	16 0 ...	4½ ... 4⅜ 4½
8000	New Dolcoath, t, c, Camborne*	3	0 0 ...	1¾ ... 1⅝ 1¾
20000	New East Foxdale, s-l, Isle of Man.	0	12 0 ...	— ...
1492	New Hendra, t, Breage	3	9 0 ...	— ...
3200	New South Merllyn, l, Flint*	2	10 0 ...	⅛ .. ¾ ⅜
3500	New Tincroft,* t, Lelant	0	0 ...	3 ... 2½ 3
5000	New Wheal Emma, c, Buckfastleigh	2	0 0 ...	— ...
4000	North Cornwall,* l, Cornwall	5	0 0 ...	5½ .. 5⅛ 5⅜
30000	North Laxey,* Isle of Man	1	0 0 ...	4s. ... 2s. 4s.
2000	North Levant, t, c, St. Just†	12	16 0 ...	1 ... ¾ 1
50000	North Molton, c, mn, i, Devon	1	0 0 ...	1 ... 1
30000	North Prince Patrick,* l, Holywell	1	0 0 ...	— ...
5938	North Treskerby, c, St. Agnes	8	17 10 ...	— ...
6400	Oola Hills,* s-l, Limerick	5	0 0 ...	— ...
12000	Pandora,* l, Carnarvon	2	0 0 ...	1 ... ¾ 1
6000	Park Valley,* s-l, North Devon	0	4 0 ...	1 ... ¾ 1
6000	Parracombe, s l, Devon	0	5 0 ...	⅝ .. ⅜ ⅝
16923	Parys Mountain,* c, Anglesea	3	0 0 ...	⅜ .. ¾ ⅜
12000	Phœnix, & W. Phœnix, t, c, Link,	5	10 3 ...	2 ... 1½ 2
4000	Pateley Bridge, l, Yorkshire	5	0 0 ...	4¼ ... 3¾ 4¼
7000	Picton,* s-l, Holywell, fully paid	1	0 0 ...	5 ... 5
12000	Plynlimmon, i, Llanidloes*	2	0 0 ...	6s. ... 4s. 6s.
10000	Port Nigel,* s-l, Carnarvonshire	2	0 0 ...	⅛ ... ¾ ⅛
2000	Prideaux Wood, t, Llanivery	5	0 0 ...	— ...
5182	Prince of Wales, c, Calstock†	2	6 0 ...	1s. ... 6d. 1s.
6000	Relistian Consols, c, Gwinear	0	10 0